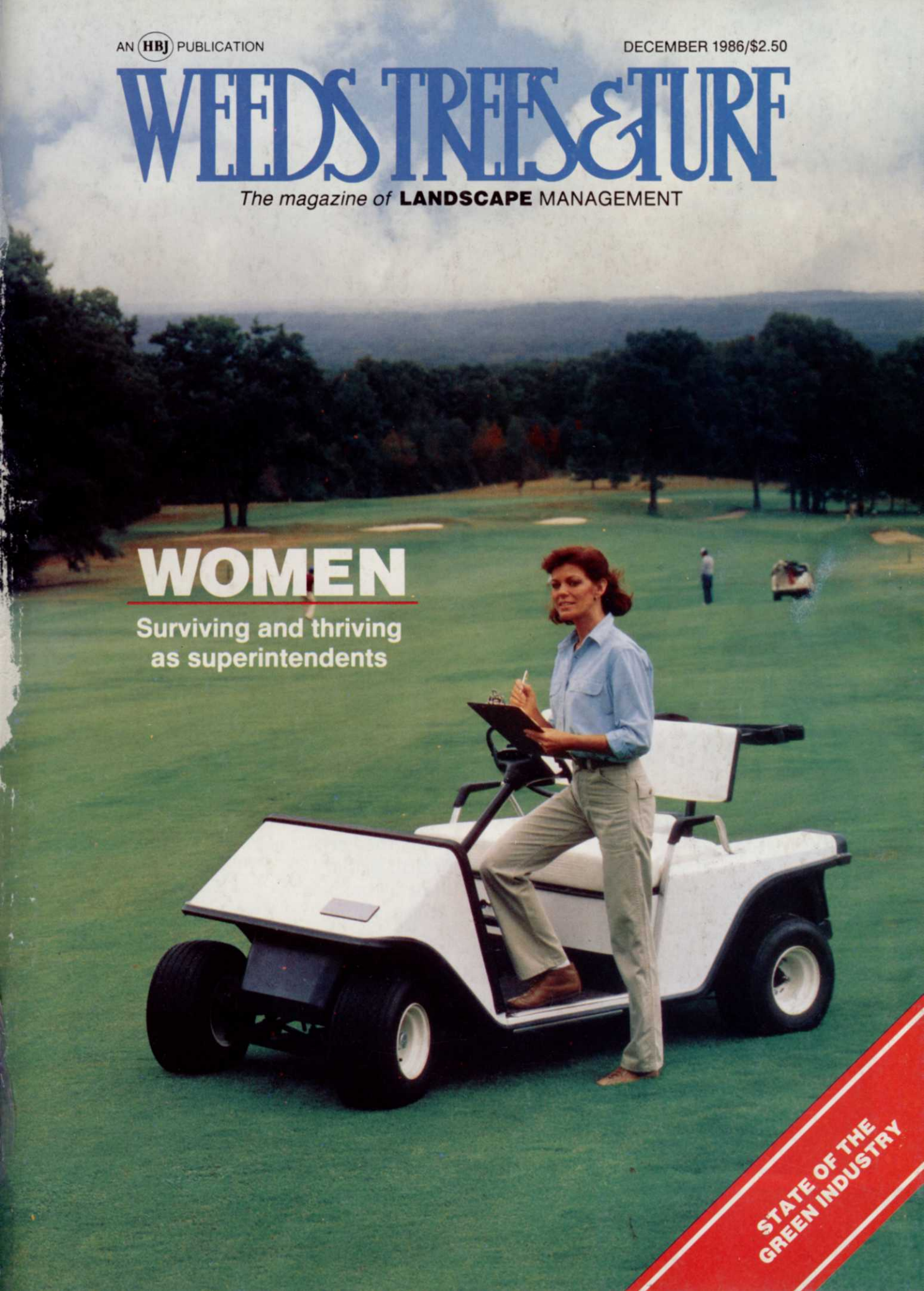
AN HBJ PUBLICATION

DECEMBER 1986/$2.50

WEEDS TREES & TURF

The magazine of **LANDSCAPE** MANAGEMENT



WOMEN

Surviving and thriving as superintendents

STATE OF THE GREEN INDUSTRY

David Kroll, CGCS, inspects one of 18 PennLinks greens at Wilmington CC, Delaware

PennLinks creeping bentgrass – working wonders at Wilmington

New bentgrass variety provides a truer putting surface at Wilmington CC.

When David Kroll, CGCS, was dealt the problem of bentgrass deterioration on the greens of this prestigious country club, he called in the experts to help. The greens could not be salvaged, so they were treated with methyl bromide and completely re-greened.

This Wilmington green was seeded in early '60s with poor quality seed fraudulently labeled Penncross. All the greens deteriorated to the point that they had to be entirely renovated.

Dr. Joe Duich, Penn State University, suggested seeding with a bentgrass coded PSU 126.

Two and a half years later, the greens look great and with PennLinks' more upright growth pattern, putt like a dream. That experimental variety is now named PENNLINKS, and is available in limited quantities.

Available in limited supply this fall in the re-usable 6 gallon "PENN PAIL."

PennLinks' Oregon certified blue tags qualify for cash awards to qualifying turf organizations for turf research. Call our toll-free number for details.

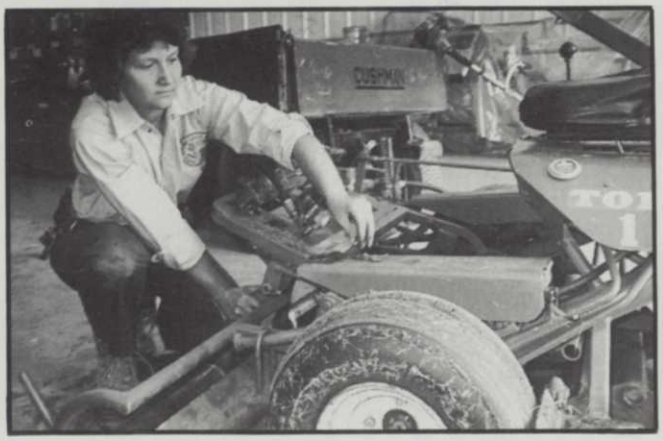
Marketed by **TEE-2-GREEN Corp.**, PO Box 250 Hubbard, OR 97032 1-**800-547-0255** TWX **510-590-0957**

Circle No. 124 on Reader Inquiry Card

DECEMBER 1986, VOLUME 25, NUMBER 12

WEEDS TREES & TURF

The Magazine of **LANDSCAPE** MANAGEMENT



15

46

15 COVER STORY: IT'S NO JOKE
The numbers are growing . . . and women golf course superintendents are not only surviving, but thriving, in what was once considered a man's job.

20 ALL SYSTEMS GREEN
The green industry is growing in all directions. An indication of this positive trend is the magnitude of chemical, equipment and seed purchases. So the state of the green industry is "green and go."

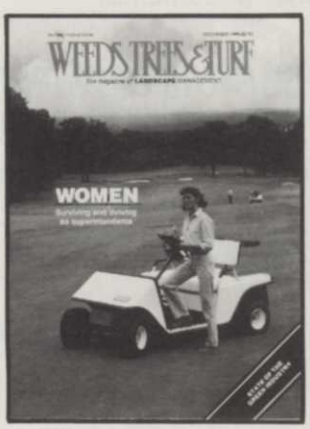
25 GOLF AND TURF CALENDAR
A detailed listing of all the major turf and golf events lined up for calendar 1987.

40 MOTIVATION TIPS
Getting the most out of employees is one key to a successful operation. A salary by itself will not provide the motivation necessary for optimal productivity.

44 THE EUCALYPTUS LONGHORNED BORER
A new insect pest is threatening California's eucalyptus trees. So far, there aren't many solutions to the growing problem.

DEPARTMENTS

2 NEWS/TRENDS
6 GREEN INDUSTRY NEWS
11 SHORT CUTS
46 JOBTALK
48 PROBLEM SOLVERS
50 PRODUCTS
53 CLASSIFIED
59 EVENTS
59 AD INDEX
60 OUTLOOK



Model C.B. Silver scans Sleepy Hollow Golf Course in Cleveland, Ohio.

WEEDS TREES & TURF (ISSN 0043-1753) is published monthly by Harcourt Brace Jovanovich Publications. Corporate and Editorial offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Advertising Offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130, 111 East Wacker Drive, Chicago, Illinois 60601 and 455 East Paces, Ferry Road, Suite 324, Atlanta, Georgia 30305. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: $25 per year in the United States: $35 per year in Canada. All other countries: $70 per year. Single copies (pre-paid only): $2.50 in the U.S.; $4.50 in Canada; elsewhere $8.00; add $3.00 for shipping and handling per order. Second class postage paid at Duluth, Minnesota 55806 and additional mailing offices. Copyright 1986 by Harcourt Brace Jovanovich, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

POSTMASTER: Send address changes to WEEDS TREES & TURF, P.O. Box 6198, Duluth, Minnesota 55806-9898.

BPA ABP HBJ HARCOURT BRACE JOVANOVICH PUBLICATIONS

Rolling ads on golf cars?

■ A campaign to place advertising on golf cars has been launched in Florida, Southern California, Arizona and other major golf markets.

The Rollad Corp. of Louisville, Ky., will pay a $50 a year commission to the fleet owner for each golf car on which ads are placed. Also part of the Rollad plan is the creation of a scholarship program for the junior golfers who help service the Rollad fleet.

The "Rollads" are 8½-inch square all-weather stick-ons which can be peeled off.

"This medium could provide advertisers with one of the longest, most intensive exposure factors in the ad industry, and it provides another source of income for course operators," says Michael A. Cox, a golf industry communications consultant who is assisting the Rollad startup.

In mid-August, the Rollad fleet was at 4500 cars; the company expects to reach 20,000 cars by the end of the year.

Golf course boom to continue

■ Why is the demand for municipal golf courses so strong?

Ken Killian, president of the American Society of Golf Course Architects notes first that, since high interest rates choked development for several years, the country is now "playing catchup" during the current period of lower interest and bond rates.

Even more importantly is the fact that about one-third of the nation's golfers are now women, according to the National Golf Foundation.

Killian also feels that the general trend toward better conditioning and more exercise has helped contribute to the demand for more high-quality golfing facilities. "Also," Killian adds, "there are more people in retirement than ever before, and many of them are avid golfers."

He adds that municipal golf courses no longer are second class citizens in the world of golf. "Some of the best new courses being designed are municipal layouts, and that trend will continue as city and recreation department personnel recognize that courses are appreciated by the general public and generate substantial income," he contends.

Rental equipment more popular

■ Changing conditions in the construction industry will force construction equipment users to take a harder look at equipment rental in the coming decade, says Marv Zoromski of JI Case.

Four major trends will influence the shift, Zoromski says: smaller projects, proposed tax law changes, increased contractor sophistication and increased competition in the rental industry.

WT&T Editorial Staff

Jerry Roche

Heide Aungst

STAFF

Editor
Jerry Roche, Cleveland
Associate Editor
Heide Aungst, Cleveland
Assistant Editor
Jeff Sobul, Cleveland
Publisher
Dick Gore, Atlanta
Associate Publisher
Ron Kempner, Atlanta
Senior Vice President
Tom Greney, Chicago
Group Vice President
Robert Earley, Cleveland
Production Manager
Anne MacLean, Duluth
Production Supervisor
Marilyn MacDonald, Duluth
Graphic Design
Jeff Elliott, Duluth
Graphic Coordinator
David Komitau, Cleveland
Circulation Supervisor
Gail Mantay, Duluth
Directory Coordinator
Michele Missinne, Duluth
Reader Service Manager
Gail Kessler, Duluth
Promotion Director
Linda Winick, Cleveland

OFFICES

ATLANTA
455 East Paces
Ferry Road Suite 324
Atlanta, GA 30305
(404) 233-1817

CLEVELAND
7500 Old Oak Boulevard
Cleveland, OH 44130
Editorial: (216) 243-8100

CHICAGO
111 East Wacker Drive
Chicago, IL 60601
(312) 938-2344

SEATTLE
1333 N.W. Norcross
Seattle, WA 98177
(206) 363-2864

DULUTH
120 West Second Street
Duluth, MN 55802
(218) 723-9200

MARKETING REPRESENTATIVES

Dick Gore
Atlanta (404) 233-1817
Ron Kempner
Atlanta (404) 233-1817
Jon Miducki
Cleveland (216) 243-8100
Robert Mierow
Seattle (206) 363-2864

HARCOURT BRACE JOVANOVICH PUBLICATIONS

Robert L. Edgell, Chairman; Richard Moeller, President; Lars Fladmark, Executive Vice President; Arland Hirman, Treasurer; Thomas Greney, Senior Vice President; Ezra Pincus, Senior Vice President; Joe Bilderbach, Vice President; James Gherna, Vice President; George Glenn, Vice President; Harry Ramaley, Vice President.

Until now, for most courses, using a triplex greensmower for fairway mowing has not been cost-effective.

The LESCO 500 Mower changes all that!

Equipped with five greensmower cutting units — mowing a 100-inch swath — the new LESCO 500 Mower provides a greens-quality cut with fewer passes down the fairway.

Engineered with the needs of the golf course superintendent in mind, the LESCO 500 offers standard features to make both mowing and servicing easy.

And because LESCO manufactures and sells direct to the user, you save money. No distributors to increase costs.

Scheduled for full production this spring, the LESCO 500 Mower is priced at $11,750.00 delivered to you.

5% additional savings can be yours by picking up your mower at one of our regional distribution facilities, contact your LESCO sales representative for details.

For complete specifications on this major addition to the growing line of quality LESCO turf equipment, call or write us today.

Call toll free.

(800) 321-5325 NATIONWIDE **(800) 362-7413** IN OHIO

The LESCO 500 Mower...fairway mowing at its finest.

(Deliveries to begin February, 1987.)

LESCO

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116 (216) 333-9250

Circle No. 114 on Reader Inquiry Card

Now! A Sprayable Turf Green-up

Let us send you a sample of FeRROMEC™ so you can see with your own eyes how fast it changes weak-looking dull grass into vibrant, deep-green, healthy-looking grass.

Everett Mealman
President
PBI/Gordon Corporation

As a professional golf course superintendent or groundskeeper, you will immediately recognize the significance of what I am about to say . . .

. . . We at PBI/Gordon have been quietly testing our patented Ferromec under a wide variety of growing conditions, and the results are conclusive! . . . Ferromec will not only deliver rapid and dramatic color responses in turf as a result of foliar intake, but will also deliver a therapeutic dose of iron to the turf through root absorption.

It means that now you can have deep, vibrant, healthy green turf without an unwanted overdose of fertilizer which could lead to all sorts of problems and exposure to disease.

No wonder we are so eager to get a sample of Ferromec in your hands. But, meantime, we urge you to take a minute or so to better understand why iron is such an elusive material, and how PBI/Gordon has managed to harness it for you.

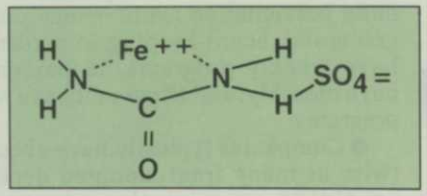
Ferrous Iron is Very Fragile.

As you know, the basic problem of supplying iron to turfgrass is its fragility in the Ferrous++ state. Only Ferrous iron can be utilized by a plant and, *ironically,* almost as soon as Ferrous Sulphate is applied it turns to the non-usable Ferric+++ state. Once oxidized, the reversal with organic matter acting as a reducing agent is so slow there is a question if it would ever occur.

And thus it is that scientists devised chelating, which is intended to fix the iron molecule in the Ferrous state. If chelating is properly done, it is effective.

Half of this green at Hodge Park Golf Course in Kansas City was sprayed with Ferromec and, within 24 hours, the color change was dramatic. Under normal growing conditions, visual response usually occurs between 8 and 48 hours after application. However, if moisture and temperature extremes exist, the response may be slower. Ferromec is also effective on trees, shrubs and herbaceous plantings.

Iron that Produces Within 24 Hours



This is the molecular structure of Ferromec. Note that ferrous sulphate is bonded to a urea molecule and will remain stable. Ferromec utilizes a recombinant urea process to achieve the unique composition. It is classified as an organometallic compound.

But it is very expensive and so slow to release that it could be many weeks before a treatment of chelated iron could produce a significant color change in the grass.

Ferromec Works Right Now!

At PBI/Gordon we have a patented process of bonding a Ferrous iron molecule to a molecule of urea, which stabilizes the iron in a Ferrous state. Notice the diagram above of the Urea/Ferrous sulphate molecule which is called Ferromec.

Ferromec can be mixed with liquid fertilizer and Super Trimec® broadleaf herbicide, and it will not harm the equipment. The Ferromec is almost immediately assimilated so the color change occurs very rapidly. The Ferromec which reaches the ground is taken up by the root system because the grass has such a voracious appetite for the nitrogen content of Ferromec.

Neal Howell Can Answer Your Questions about Iron in Turf

Iron is definitely established as an essential micronutrient required by all plants. Yet, the amount required can vary dramatically depending on the pH of the soil, the composition of the fertilizer that is being used and the plant that is being fed.

To help you better understand how to use iron in your turf program, we have brought Neal Howell into the PBI/Gordon organization as Director of Technical Sales Services of Soil Supplements. He is a leading authority on iron and is as near as your telephone when you have questions.

You'll like Neal. He's a *real Ironman* whose roots go back to the Iron Knights of the "Hell on Wheels" gang of the 2nd Armor Division from Fort Hood (that's General Patton's old bunch).

Ask for Samples of these New Products from PBI/Gordon

Other new products that have been developed and thoroughly tested by PBI/Gordon are Bov-A-Mura,® a patented, natural organic activator that turns thatch into humus; and Transfilm,® a patented year-around plant protector that is up to five times more effective in reducing transpiration, and lasts up to twice as long as conventional plant protectors.

For your free samples of Ferromec, Bov-A-Mura, and Transfilm, write or call . . .

Toll-free 1-800-821-7925
In Missouri 1-800-892-7281
Ask for Customer Service Department.

Inform us of bids to be let.
We furnish detailed specs and names of distributors serving your area.

Trimec,® Bov-A-Mura,® and Transfilm® are registered trademarks of PBI/Gordon Corporation.

Ferromec™ is a trademark of PBI/Gordon Corporation.

© PBI/Gordon Corporation 1985

pbi / GORDON CORPORATION
1217 WEST 12TH STREET
P.O. BOX 4090
KANSAS CITY, MISSOURI 64101
816/421-4070

FeROMEC™

IRON FROM THE TRIMEC® PEOPLE

TURF HERBICIDE

651-1185

EQUIPMENT

Half of equipment service is in-house

Nearly half of the landscape management companies answering a WEEDS TREES & TURF survey have in-house equipment service technicians. Forty-nine percent said they have service technicians on the payroll. Most of the rest of the companies depend on either commercial service dealers or distributor service departments.

While the Midwest (54 percent) Southeast (54 percent) and Northeast (48 percent) depend most heavily on staff service technicians, the Southwest heavily favors commercial service dealers for maintenance (50 percent).

Other facts revealed by the survey conducted for The Toro Company:

● Seventy-one percent of the respondents provide turf cultivation such as aeration.

● Four out of 10 landscape management companies mow between 50 and 200 acres of turf per year.

● Most common training practices employed are, in order of popularity, hands-on demonstrations, lectures and a review of the owner's manual.

● Cutting season lengths: 7 months in the Northeast, 7½ months in the Midwest, 9 months in the Southeast, 10 months in the Southwest.

● 34 percent of the companies have daily preventative maintenance programs and record-keeping; 31 percent have weekly programs, 18 percent have monthly, and 17 percent have no programs.

● Companies typically have about twice as many front-mounted decks on riding mowers than center-mounted decks on lawn tractors.

● Price is not the top determining factor in making a purchase—parts availability is.

LAWN CARE

PLCAA not opposed to lawn sign-posting; planning to mount public relations blitz

The Professional Lawn Care Association of America has changed its policy toward lawn care companies which wish to adopt voluntary sign-posting of treated lawns.

The new policy reads:

"The PLCAA believes proper application of labelled pesticides by licensed, trained applicators is the primary issue in ensuring public and employee safety. The association is not opposed to the voluntary posting of lawns after application as a courtesy to customers as notice that an application has been made.

"The association further believes that, if notification of pesticide application is to be required, notification or posting requirements should not single out applications to a particular site such as lawns, or a particular type of applicator such as commercial applicators."

The PLCAA's previous written policy did not condone sign-posting. To make the change was a difficult decision, according to James Wilkinson, PLCAA president.

"The Board of Directors...given the fact that there were a number of companies most likely posting in 1987, decided that we should take a look at that policy," Wilkinson told LCOs at the PLCAA's annual conference last month. "The first thing we felt necessary was to avoid the issues of safety and health. Our policy and feelings are quite strong that the application of pesticides by professionals pose no health, safety or environmental problems whatsoever."

The change was greeted with mixed emotions by PLCAA members attending the conference.

Other "hot" topics covered during the volatile but informative conference included the recent media scare and the possible loss of 2,4-D herbicide from the list of EPA-approved pesticides.

"The association will develop a pro-active public relations campaign to counter the negative attention that our industry has been receiving," said Wilkinson, referring to a barrage of bad national publicity directed at LCOs in 1986.

Here is the short-term program the PLCAA is implementing:

● reducing data gaps on the pesticides LCOs use;

● making a list of third-party experts the organization can turn to;

● providing "damage control" to LCOs who face local negative publicity;

● putting together a media information kit;

● organizing a "media alert network;"

● sending information to members to help them respond to negative publicity, including a booklet entitled "The News Media's Lawn Care Scare: Fact or Fiction?" and

● establishing industry advisory committees from manufacturers.

Because the costs of warding off negative newspaper articles and radio and television programs is running to $6,000 per month, the PLCAA will solicit extra funds. The organization is asking for voluntary contributions from manufacturers and is assessing the membership quarterly. Member donations in 1987 will be a minimum of $100 for the smallest companies to a maximum of $1500 for the largest companies.

The seventh annual convention and trade show broke all records for number of exhibitors and attendance. More than 1700 LCOs visited Baltimore for the event.

Roadside officers

Bill Johnson (right), state landscape engineer for the North Carolina Department of Transportation, is the new president of the National Roadside Vegetation Management Association (NRVMA). Elected as vice-president at the annual meeting in St. Louis was Carl B. Wills (center), roadside environment state administrator for the Kentucky D.O.T. Re-elected as secretary/treasurer was Larry Munzenmaier (left), Du Pont sales representative.

INDUSTRY

Buy-outs, mergers affect green industry suppliers

Within the last several months, major shufflings have taken place among green industry suppliers.

Hoechst A.G. of West Germany aquired New York-based Celanese Corp. for $2.84 billion, a merger which forms the world's largest chemical company.

Celanese and Hoechst together had 1985 sales of $17.6 billion, which puts them ahead of Du Pont, which reported sales of $16.6 billion last year.

Hoechst manufactures Acclaim, a post-emergence herbicide, for which registration is pending. The company also makes Trevira, a nonwoven polyester fabric used by Warren's in its Terrabond landscape fabric.

Lesco, Inc. of Rocky River, Ohio has aquired Groves Industries, Inc. of Elyria, Ohio. Groves Industries works in precision machining, manufacturing, fabrication, painting and finishing.

"Groves is an important supplier to Lesco of various precision parts used in our greensmower and will expand into production of components for other turf care equipment which we manufacture and market," says Jim FitzGibbon, chairman of Lesco.

Steven Groves, former president of Groves Industries has joined Lesco as vice president, manufacturing.

The Alamo Group of Seguin, Texas has purchased the BMB Company of Holton, Kan. Alamo Group completed

continued on page 11

1-2-3

Chemical spills are one of the landscape manager's biggest fears. But pesticide expert Phil Catron says such spills can be avoided.

Catron told the Florida Turfgrass Conference causes of vehicular accidents:

- excessive speed;
- following too closely;
- not keeping your eyes on the road; and
- backing.

Catron says 90 percent of all accidents occur because of improper backing.

He defines proper backing of a tanker:

1. Check all mirrors.
2. Walk around the truck before backing.
3. Don't back up, if it can be avoided; drive around the block.
4. If people are in the truck with you, have them get out and watch you back up.

Tanker characteristics—height and weight—play a role in accidents. A tanker is most dangerous, Catron warns, when it is half full because of the shiftable fluid load.

Even with these safety precautions, accidents can happen, in which case Catron advises:

1. Save people first.
2. Contain the spill. If the spill is small, use kitty litter to absorb it. Keep the kitty litter in a plastic garbage bag and dispose of it in an approved landfill.

Lesco's Hazorb pillows are even beter than kitty litter. The pillows should be carried in the truck.

If the spill is large, dike it up, using all available resources.

3. Notify your employer. He or she can dispatch help.
4. Always carry a registration sheet in your truck, telling what chemical you are carrying and its EPA registration number.
5. Have a list of emergency phone numbers readily available in case the accident leaves the driver unconscious.

Finally, Catron notes, keep an emergency plan outlined for your employees with the proper accident procedures listed.

"1-2-3," a column describing pesticide safety "by the numbers" is a regular feature of WT&T.

Landscape Exposition

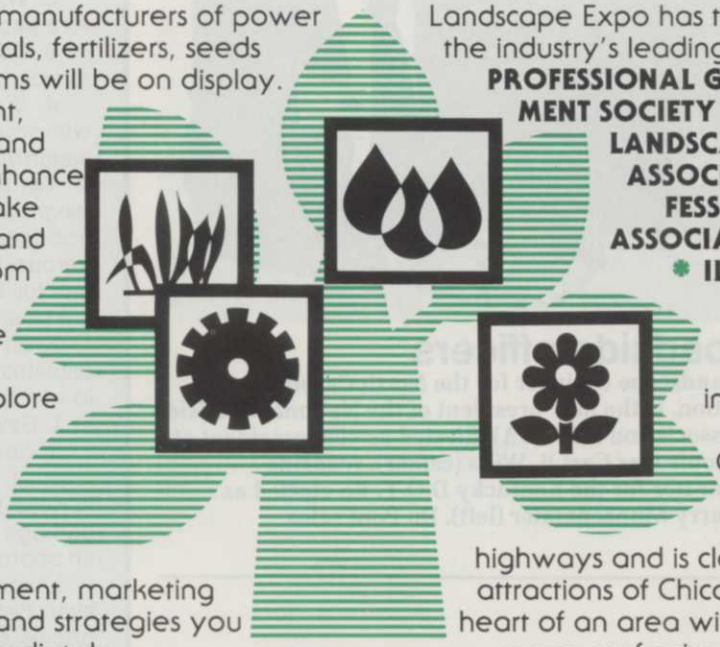
THE SECOND ANNUAL LANDSCAPE EXPOSITION

MARCH 3-5, 1987
O'HARE EXPOSITION CENTER, ROSEMONT, ILLINOIS

THE RIGHT STUFF FOR LANDSCAPE PROFESSIONALS

If you're a landscape professional looking for the 'right stuff' to operate more effectively and efficiently in the future, look no further. Landscape Expo has it. **In fact, we are the established national forum for landscape professionals.**

Over 225 national manufacturers of power equipment, chemicals, fertilizers, seeds and irrigation systems will be on display. See new equipment, products, supplies, and services that will enhance your operation, make you more efficient and increase your bottom line. Choose from over 30 conference sessions and workshops that explore the critical business challenges facing green industry professionals. Learn practical, hands-on management, marketing and technical skills and strategies you can put to use immediately.



Landscape Expo has the active support of the industry's leading associations: **• THE PROFESSIONAL GROUNDS MANAGEMENT SOCIETY • THE ASSOCIATED LANDSCAPE CONTRACTORS ASSOCIATION • THE PROFESSIONAL LAWN CARE ASSOCIATION OF AMERICA • ILLINOIS LANDSCAPE CONTRACTORS ASSOCIATION.**

Landscape Expo is in the right place too. O'Hare Exposition Center in Rosemont, Illinois is convenient to airports, major highways and is close to the sights and attractions of Chicago. O'Hare is at the heart of an area with over 16,000 landscape professionals within 300 miles.

Join your colleagues at the Second Annual Landscape Expo, March 3-5, 1987, O'Hare Exposition Center, Rosemont, Illinois. You'll come away with the right stuff.

Take advantage of the best offer you'll have in 1987: to be part of the year's most exciting marketplace. Call or write now for more information.

Produced and Managed By: HBJ HBJ EXPOSITIONS & CONFERENCES

Sponsored By: *Weeds Trees & Turf* and *Lawn Care Industry* Magazines

Mail this now and plan to attend or exhibit:

Landscape Exposition

P.O. Box 5555, 50 Washington Street,
Norwalk, CT 06854
Phone: **(203) 853-0400 (800) 243-2815**

YES! I'M INTERESTED!
Please send me, at no cost or obligation, an
☐ Exhibitor's prospectus and application
☐ Attendee's information package

Name _____ Title _____

Company _____

Address _____

City _____ State _____ Zip _____

( ) Telephone _____

Business Function _____

BUY-OUTS *from page 7*
the aquisition in August.

BMB manufactures rotary mowers, rear blades for tractors and cultivators. BMB also manufactures rotary mowers for Ford Tractor under Ford's brand name.

BMB will continue its operations in Holton. The facility there will be expanded to allow increased production, including the manufacturing of the Rhino product line.

Thomas A. Herrmann of Easton, Conn. has purchased Locke Manufacturing, Inc., of Bridgeport, Conn. Locke is the manufacturer of professional lawn care equipment. Herrmann is Locke's seventh owner in the company's 62-year history. He will also become chief operating officer of the firm.

GardenAmerica Corporation has signed an agreement to purchase Irri-Trol Manufacturing of Valencia, Calif. for about $7 million. Irri-Trol manufactures specialty irrigation controllers for landscape architects and installers. GardenAmerica manufactures lawn and garden products for residential and light commercial applications.

RSI Corporation, of Greenville, S.C. has aquired DeBra Enterprises, Inc., (Hollywood, Fla.) and Turf and Industrial Equipment, Inc. (Orlando, Fla.).

DeBra sells turf care products to golf courses, commercial customers and government units. Turf and Industrial Equipment sells and services turf equipment.

Sax Industries, Inc. of Nash, Texas, has purchased the assets and complete inventory of F.E. Myers power spray division in Ashland, Ohio. The company will produce and market general purpose and air sprayers for golf courses, parks, schools, cemeteries, lawns and municipalities.

The Agricultural Services Division of Land O'Lakes, Inc. has aquired 24 midwestern retail fertilizer plants from the International Minerals & Chemicals Corp. Land O'Lakes is a major supplier of fertilizer and agricultural chemicals in the upper Midwest.

PESTICIDES

Preemergence material works on 90 weeds

Elanco Products Co. hopes to have EPA label approval for EL-107, a preemergence herbicide, by early 1988.

The new herbicide for turf and ornamentals has broadleaf activity. It is the only experimental pesticide that

SHORT CUTS

NO MORE COMPETITION... Competition has become cooperation for members of the ALCA Interior Landscape Division and the Interior Plantscape Association. The ILD, now the IPD, has assimilated IPA members, thereby almost doubling its membership, according to WEEDS TREES & TURF sources. The new, larger group, though remaining under the umbrella of the Associated Landscape Contractors of America, promises to be a more effective organization than either of its predecessors.

BOUT WITH THE DROUGHT... Golf courses on Hilton Head Island stayed green through the summer's severe drought despite restrictions on water usage. The reason: the courses are watered with sewage effluent rather than fresh water. This actually helps the level of the island's underground water aquifer. The earth's soil filters out the remaining impurities in the effluent before it reaches the aquifer to replenish the water source.

COUNT DOWN... Northrup King Seed Company has hit the market this fall with the first salt-tolerant sod, ideal for roadsides and rights-of-way. The company, a leader in researching native grass varieties, previously marketed only salt-tolerant seed mixes, primarily its Boulevard mix. But according to turf specialist Mark Grundman, the mix must be composed by seed count, rather than seed weight. Grundman says if its not done that way, certain aggressive native varieties will take over.

JUST DOWN THE RIVER A BIT... The Skokie River— well, actually it's more like a brook— flows through nine golf courses outside of Chicago, Ill. It starts at Lake Bluff Golf Course in Lake Bluff and flows from there to Deer Path Park Golf Course (Lake Forest) to Onwentsia Club (Lake Forest) to Old Elm Club (Lake Forest) to Highland Park Country Club (Highland Park) to Sunset Valley Golf Club (Highland Park) to Bob O'Link Golf Club (Highland Park) to Northmoor Country Club (Highland Park) to, finally, Glencoe Golf Club (Glencoe). That's about 10 miles "as a crow flies," says Onwentsia's superintendent Paul Boizelle.

THEY'LL GET YOUR GOAT... Way down in the lowlands east of Dallas, Texas, goats are everybody's friends. It gets a little messy at the city water plant in the summer when a combination of heat and oozing sludge produces lagoon grass that swarms up and swallows tractors. Enter seven Spanish goats who now keep the 67 acres groomed. The area previously needed twice-monthly mowings by seven men and a host of mowers. The animal maintenance unit is a neighborly arrangement between Samuell Farm and the nearby water plant. The plant saves gas and labor costs, while the goats eat for free.

Elanco is developing specifically for the specialty markets.

Company personnel say that they will probably recommend mixing EL-107 with a dinitroaniline (like pendamethalin or Balan) for sharper grass control. It also controls dandelions and buckhorn.

The product has been shown to work on 90 species of ornamentals for weed control, both alone and in combination with another Elanco product, Surflan.

TECHNOLOGY

Plant stress monitor measures turf's health

Standard Oil is testing a plant stress monitor that yields a "stress index" to enable turf managers to more accurately program irrigation needs.

The instrument has been placed in the hands of two golf course superintendents—one in the Cleveland, Ohio area, and one in the Atlanta area—for field trials. If tests are positive, it will be marketed to golf course superintendents and other turf managers.

The monitor, a hand-held "gun" attached to a computer worn at the waist on a should strap, monitors the physiological state of the turf. After measuring the plant's leaf temperature, ambient temperature, relative humidity and solar radiation load, the data is processed by the computer. The resulting "stress index" gives the turf manager information needed to analyze irrigation effectiveness and project irrigation requirements.

"There's still a question as to how we're going to release this product," notes Steve DeSutter of Standard Oil of Ohio. "But we're working on an agreement with one of the major irrigation suppliers to the turf industry."

A specific release date is yet to be determined.

FERTILIZER

Lebanon Chemical expands fertilizer line

With the purchase of Tidewater Agricorp Inc. of Chesapeake, Va., Lebanon Chemical Corp. significantly expands its liquid fertilizer line.

Tidewater has 20 fertilizer outlets in the coastal regions of Virginia and North Carolina. Last year, Tidewater's liquid fertilizer retail sales were in the multi-million dollar range.

Mark Nuzum, manager/agronomist at Tidewater's Chesapeake facility, will handle marketing and sales of the acquisition.

RESEARCH

Dutch find treatment for Dutch elm disease

Scientists at the Institute of Applied Chemistry in Zeist, Holland, have found a way to treat Dutch elm disease.

They have found that injecting a tree with fenpropimorph, a fungicide also used to treat mildew on cereal crops, will block the spread of the fungus that causes the disease. Fenpropimorph has been proven harmless to Dutch elms, but prevents the fungus from giving off spores that spread the disease.

It can be used either preventatively or curatively. Used preventatively, it has been 100 percent effective.

Treatments of this kind are labor-intensive and, thus, expensive. But researchers at the Institute say a Dutch elm "vaccine" could be on the market as early as next year.

CHEMICALS

Turf regulator shows promise in Northwest

While turf growth regulators have won increasing acceptance in many parts of the country, they haven't been widely available in the Pacific Northwest. But research conducted with Limit turf regulator shows promising results for reducing grass growth in the particular growing and climatic conditions of Washington and Oregon.

Tom Cook, associate professor of horticulture at Oregon State University, has been testing the product in Oregon's Willamette Valley.

"We've seen the most impressive results on bluegrass," he says. "The treatment with Limit did not completely stop grass growth as some growth regulators do, but it did slow it down significantly. There was no visible discoloration or loss of turf quality."

Mike Vandecoevering of the Wilbur-Ellis Co. adds, "From what we've seen so far, it appears to have a real nice fit in our landscape management programs." The Wilbur-Ellis Co. has begun distributing Limit on a test market basis in Washington and Oregon.

CUT A LOT MORE TURF

Loaded with features, the newest generation of highly maneuverable Power Quint mowers virutally guarantee you decades of the finest turf care with even small PTO-equipped tractors. Adjustable reels work against heavy duty bedknives in individual cutting units that truly float over uneven terrain. And when the job's finished, this

NATIONAL MOWER COMPANY
SINCE 1919

© 1986, National Mower Co.

ASK ABOUT OUR NEW VERTI-CUT UNITS!

RESEARCH

Gypsy moth populations self-destructive?

According to researchers at Cornell University, gypsy moths may carry a chemical toxic to them in their bodies.

At least 10 percent of the moths in a test at the Boyce Thompson Institute for Plant Research are infected with a virus deadly to them which passes on to offspring. The virus produces no recognizable symptoms until it is triggered by an unknown catalyst.

Scientists at the institute plan to bombard a colony of infected gypsy moths with different types of stress in order to find the catalyst.

Virologist Alan Wood suspects that the trigger may be chemicals produced by trees or shrubs which the moths feed on, such as tannin. If they are right, they could eliminate whole populations of moths by spraying this chemical on infested areas.

Gypsy moths have destroyed millions of acres of forests in this country, mainly in the Northeast and Midwest. They attack more than 100 species of trees and shrubs.

INSECT CONTROL

New insecticide is tree extract

A new type of insecticide is based on extracts of neem, a common tropical tree. Tests show that more than 80 major insect pests can be controlled by neem extracts.

The first label for a commercial neem product was recently granted by the EPA for insect control on some horticultural crops.

In tests, neem gave safe and inexpensive control of two formidable insects—the sweet potato whitefly and the Colorado potato beetle—which have gained resistance to many other insecticides.

PESTICIDES

Ciba-Geigy refutes EPA diazinon decision

Ciba-Geigy says the U.S. Environmental Protection Agency's decision to revoke the use of diazinon on golf courses and sod farms by the end of the year is based on "inadequate scientific review."

The insecticide has been linked to bird kills, according to the EPA.

Ciba-Geigy, major producer of the pesticide, says the EPA has "ignored the company's eforts to scientifically resolve concerns of certain uses."

The decision to ban use on golf courses and sod farms was based on documented evidence of bird kills, claims the EPA's George Larocca. The evidence was exmamined by the agency's Scientific Advisory Panel.

Diazinon has been registered for use on golf courses and sod farms for more than 30 years, and has been used on turf for more than 20.

Ciba-Geigy says in the news release that it tried twice in the last year to discuss the concerns with the EPA and was rebuffed both times.

"We were completely ignored," says Dr. Haney B. Camp, vice president of research and development for Ciba-Geigy's agricultural division. "Ciba-Geigy and the EPA have successfully resolved concerns many times in the past. We do not understand why the agency has turned a deaf ear to us this time, in comparison with past experience."

This fall, the company will test new application rates and new formulations to reduce hazards to birds.

Use on residential and commercial lawns is presently under review by the EPA. That review will be completed by the end of the year.

PEOPLE

Adikes chairman passes away

Philip Adikes former chairman of J&L Adikes seed company of Jamaica, N.Y., died September 27th. He was 75. Adikes had been with the company for 34 years. He was a grandson of the founder. **Robert A. Russell**, Adikes president, will become chairman when purchase arrangements are complete.

Rain Bird Sales makes the following appointments: **Dick Schaeffer** is named a golf manager; **Bob Olson** is appointed Eastern regional sales manager for the turf division; **Bob Bernards** is Pacific Northwestern district manager for the turf division; **Bill Tullos** is named North/Central Florida district manager for the turf division. Rain Bird is headquartered in Glendora, Calif.

The American Society of Golf Course Architects accepts three associate members: **Bruce Borland,** Long Grove, Ill.; **Brian Silva,** Whittinsville, Mass.; **Michael Dasher,** Orlando, Fla.

Michael E. Leeson resigns as exec-

WITH LESS TRACTOR

11½′ unit folds up its outboard reels automatically for easy trailering and storage.

For all the details and a free demonstration, call or write today for the name of the dealer nearest you.

National Mower Company
700 Raymond Avenue
St. Paul, Minnesota 55114
612/646-4079.

Circle No. 118 on Reader Inquiry Card

Dick Schaffer

Bob Olson

Bill Tullos

Frank Hernandez

Anthony Saiia

Earl Klepel

utive director of the **California Landscape Contractors Association**. He leaves the group after 14 years to enter private business.

Roy C. Ontiveros joins **Pacific Sod** as turfgrass advisor and technical representative in Los Angeles, Riverside and San Bernadino counties. He is an 18-year green industry veteran.

Alamo Group names **Frank Hernandez** territory manager for the states of Nebraska, Kansas and Missouri. He's been with the company since 1980.

Yardmaster names **Michael S. Whitman** staff designer and **Kerry G. Kitchel** horticulturist in the sales and service areas. Whitman is the sixth landscape architect to join the company.

Michael S. Pratt joins **Erosion Control Systems** business of Gulf States Paper Corporation as product manager.

Jacobsen Division of Textron Inc. names **Anthony Saiia** vice president of engineering and **Earl Klepel** vice president of manufacturing. The company names **Robert Krick** product manager while **Mark Foree, Jack Ball and Bill Swann** are appointed dealer sales managers for the Commercial Products line.

E-Z-Go/Textron names **Frank Smith** national sales manager for the reorganized Turf, Industrial and Commerical Vehicles Division. The restructuring divides the country into three regions—West, Northeast and Southeast—each under the direction of a regional sales manager. **Bill Manning** is West sales manager; **Steve Cotton** is Southeast sales manager; and **Jim Simmons** is Northeast sales manager. **E-Z-Go/Textron** names **J. Hampton Manning** vice president of Turf, Industrial and Commercial Vehicles Sales.

Bob Knoche joins the Landscape and Turf Division of the **L.R. Nelson Corporation** as district sales manager for Southern California, Arizona and Southern Nevada. He has over 15 years of industry experience.

Tom Hashman is promoted to product development manager, Midwest region, for **Stauffer Chemical's Agricultural Products Division.** He joined the company in 1979.

Barbara Craycraft is manager of all large accounts.

Cyanamid International Agricultural Division names **Bruce Andrews** vice president, pesticides. He was formerly director, animal products.

TURF-PLUGGER
CORE AEROATOR

- Self Propelled
- Quiet Running
- Easy Maneuvering
- Straight Up-and-Down Motion for Better Penetration
- All Roller Bearings – Case-Hardened Shafts
- Low Maintenance

3 MODELS AVAILABLE

400 - 24,000 Sq. Ft./Hr.
500 - 26,000 Sq. Ft./Hr.
600 - 36,000 Sq. Ft./Hr.

Ask about major lawn care companies who use it exclusively!

Classen Mfg. Co.
1403 Roach St. • Norfolk, NE 68701 • (402) 371-2294

Circle No. 107 on Reader Inquiry Card

Mix and Match... Bradco Attachments!

Start with a tractor, mix and match a backhoe, trencher or blade. Build a multi-purpose unit at a low cost.

Bradco attachments add profit by offering flexability. Other size units are available.

Prices shown less tractor.

AMERICA'S LARGEST LINE OF SMALL BACKHOES

bradco

American Trencher Inc
Box 266, Delhi, Iowa
(319) 922-2981

Circle No. 103 on Reader Inquiry Card

COVER STORY

IT'S NO JOKE

The numbers are growing...and women golf course superintendents are not only surviving, but thriving, in what was once considered a man's job.

by Heide Aungst, associate editor

Sandy Bemis, superintendent at Renwood Golf Course in Round Lake, Ill., repairs a tractor.

"She can already say 'pesticide' and 'irrigation,' and she can swing a golf club too," Jo-Ann Eberle Ward says of daughter Kate. Ward's husband John helps with the golf lessons.

It's a typical scenario: A golf course superintendents' meeting. The speaker gets up to the podium and starts to expound on his dry wit. "Did you hear the one about the guy who..." He glances around the room, and suddenly stops.

Oh no! There's a woman in the room.

"It's great, I know half of so many dirty jokes," says Sandy Bemis, superintendent of Renwood Country Club in Round Lake, Ill. "They see me sitting there and stop in the middle. Some day I'll have the guts to say, 'Never mind, I've heard this one.'"

Bemis knows a good sense of humor is the best ammunition in the male-dominated profession. "When an invitation says tie required, I put one on," she says.

The Golf Course Superintendents Association estimates 25 to 100 women golf course superintendents for 12,278 courses nationwide. GCSAA total membership is about 6,900.

It's difficult to pinpoint the exact number of women supers.

The GCSAA membership roster lists 40 women with distinctly female names. Another 40 people are listed by initials only, and about 70 have androgynous names.

"I thought about just using my first initial. That way they can't tell when you apply for a job," says Jo-Ann Eberle Ward, superintendent of Sunset Valley Golf Course in Pompton Plains, N.J.

Bemis and Ward both work at municipal courses. "No one has really broken into a Winged Foot or any of the conservative old clubs," says Shirley Talmadge, assistant superintendent of the prestigious Winged Foot Golf Club in Mamaroneck, N.Y.

Talmadge has struggled through management changes at Winged Foot to work her way to second in command. "If I had brains in my head, I would have left," she says. "But because I'm a woman, I'm older and I'm on my third career, I felt the fastest way to get to the top was to stay with a top club."

Getting there

Women superintendents don't fit into any particular stereotype. Talmadge, at 37, is more than a decade older than Bemis, 25. Ward is 32. Ward's husband John works in the industry, as a resort landscape manager. They have one daughter, Kate, almost 3.

Bemis's husband Ken is a flight instructor. They don't have any children.

Talmadge has never married.

The thing all three women do have in common is an avid love for the outdoors, and a determination to work there. But the paths which led them to the golf course are as different as greens and roughs.

"My mom wanted me to be an airline stewardess so she could get free

It's been tough for women to break into private clubs, says Shirley Talmadge, assistant superintendent at Winged Foot Country Club.

trips," says Bemis. "My dad didn't care what I did, as long as I didn't get dirty."

At 15, Bemis landed a job as a gardener on a golf course. The experience prompted her to take horticulture classes at a local vocational school.

Bemis excelled in floral design, but "went crazy" trapped inside a florist shop on nice days. That led her back to Midlane Golf Course as a seasonal worker for five years.

Then she got an assistant superintendent's job at Heather Ridge Golf Course. After three years there, she accepted a job at Renwood as an assistant. Within six months, the super left and she took over his responsibilities.

Today she oversees 138 acres on the 18-hole course, and two staffers.

No yelling

"At first it was real hard because you're telling men what to do," Bemis says. "So I didn't tell them, I asked them."

Bemis also finds golfers react differently to her than they might a male superintendent. "Folks out here are kind of surprised," she says. "They'll say 'I want to talk to the man in charge.' I get talked to rather than screamed and yelled at. They're more hesitant to yell at a woman."

Ward started as a secretary at the Playboy Resort and Country Club in northern New Jersey. But she wanted to work outside and applied for a job on the course. "When I first went for the job, I didn't realize it was male dominated," Ward reflects. "The superintendent said, 'I'll put it to you this way, kid. If you're crazy enough to want to work outside, I'm crazy enough to hire you.'"

After taking turf courses at Rutgers University, she became assistant superintendent at High Mountain Country Club in Franklin Lakes, N.J. Later that year she became assistant superintendent at the Americana Resort and Country Club, where she worked on 27 holes and more than 700 acres of golf course and hotel grounds. The extra holes qualified Ward above other male candidates who applied for the superintendent's job at Sunset Valley, which she took in '84.

The course is 150 acres, with about 300 rounds of golf played daily. She supervises seven full-time employees and usually three more during the golf season.

> *'My mom wanted me to be an airline stewardess so she could get free trips.'*
>
> *Sandy Bemis*
> *Renwood Country Club*

She says she's never had a problem supervising men. "I've made it clear that what I say goes, but they're entitled to their opinions," she says. "They know if they have a problem they can come to me."

Talmadge started in the pre-med program at Vanderbilt University in 1967. The pre-med experience gave her a solid chemical background which later helped her get her pesticide license.

She got a degree in anthropology and psychology, worked overseas in the importing business, and eventually ended up back in New York.

There she worked on a golf course for spending money. She fell in love with the job.

In 1981, she went to the University of Massachusetts for a two-year degree in turf management. She completed her five-month work program with Ted Horton at Westchester Country Club. In 1983, she took a job on the crew at Winged Foot.

Several changes in superintendents left her in line for the assistant's job in late '84. But, she says, superintendent Bob Alonzi was hesitant to give her the title. "He said the foreman and crew wouldn't take orders from a woman," she said. "The first time he left, I had to tell them myself. I did all the records without the title. I had to prove myself over and over again."

The crew has nine full-time workers, with more than 20 in the summer. *Golf Digest* (Nov. 1985) ranked Winged Foot the fifth-best course in the country.

Getting physical

Greens committees are often hesitant to hire a woman superintendent. They argue that a woman can't handle the physical labor involved.

Women superintendents argue in return that it's like any other job—some women aren't cut out for it. But, then, some men couldn't handle it either.

"It's a crazy idea I've always had that if a guy can do it, I can do it too," Bemis says.

And, of course there's the "problem" of women becoming pregnant. "I dug up an irrigation break when I was six months pregnant," says Ward. "I worked up until a week before Kate was born."

Kate was born on Christmas day, "during the off-season, of course."

"I always say she'll be the second woman golf course superintendent," Ward jokes. "She can already say 'pesticide' and 'irrigation,' and she can swing a golf club, too."

Ward has a house on the golf course, which makes it easier to balance career and home. John drives more than two hours to his job, so Jo-Ann can keep her job.

Bemis also plans to have children and keep her job as superintendent. "In this day and age, unless you're really lucky, both people have to work. It's just another job," she says. "We'll just mount a child seat on the back of the tractor."

Women supers still have a long way to go. But Bemis, Ward, and Talmadge all advise starting as a crew member, getting an education, being involved with professional organizations like the GCSAA, and working within the system. "If you're going to be sensitive and try to fight intellectual white-collar battles in this field, you're not going to get anywhere," Talmadge says. **WT&T**

Wouldn't it be great if your old standby broadcast herbicide could also handle early-emerging HTCs*?

*Hard-to-control weeds like oxalis, ground ivy, prostrate spurge and wild violet.

TURF'S GRANDAME

It's really not a new trend for women to work as golf course superintendents. Just ask Virgie Ross.

A great-grandmother to four girls (she has two daughters, and two granddaughters), Ross retired from Homewood Golf Course, in Ames, Iowa, just four years ago.

In 1974, Ross became Iowa's first woman superintendent and one of the first women in the country to hold such a position.

"I lost my husband and I needed a job," she remembers. "The parks and recreation director had faith in me. He told me his demands, and I really had to work to be a Class A superintendent."

With old-fashioned savvy, Ross pioneered work in an area few women chose as a career. She inherited the job from her husband, Gerald, who died mowing greens in '74. But where another woman might look for more traditionally female work, Ross went to the parks and recreation director and asked for the job.

Virgie Ross helped pioneer women working as superintendents. This photo was taken before her retirement four years ago.

The physical labor involved was no problem. After all, she and Gerald had farmed together for more than 20 years, and she loved working outside.

Not for men only

In fact, because of her farming background, she never thought twice about the job being for men only.

"My feeling is that women can be in this as well as men," she says. "I come from an era where women were supposed to be careful lifting things. Sure, maybe they won't pick up a 100-pound bag, but then they can take two buckets and just carry smaller loads at a time."

By her definition, her career started in a one-room country school house in Winfield, Iowa, in the '30's, when she met Gerald. They married in 1937.

The two worked closely together at whatever task they undertook. They gave up farming in the '60's, several years after Gerald suffered his first heart attack.

They moved to Columbus Junction, Iowa, where Virgie ran a cafe and Gerald sold hog feed and worked at a gas station. The local banker was chairman of the golf course board and approached Gerald with a superintendent's job.

The Musser 'bible'

He jumped at the chance and started attending seminars and reading everything he could on the subject. "Musser's old turf management book was his bible," Virgie remembers. "I thought he had it memorized."

In 1971, he wrote to Homewood Golf Course in Ames, Iowa, interviewed on a Wednesday and by the following Monday, they had moved to Ames.

Three years later, after Gerald's death, Virgie began running the course, attending classes, and becoming active in the GCSAA.

"I walked into one of the first meetings. They were playing golf, and they said, 'You can't play today. This is for golf course superintendents.' I said, 'I *am* a superintendent,'" Ross says.

But the job didn't go as smoothly as she thought it would. "The man who hired me believed in women being in men's work, if they can handle it," she says. "But he moved to California and they hired another guy who resented me very much."

Her boss' prejudice against women forced her to retire when she turned 65.

"I wouldn't be sitting in this empty mobile home by myself if I hadn't had that boss," she says. "I resent drawing Social Security when I could be working. I can still sit on a tractor and mow grass."

Despite the loss of her job, she stays active with the GCSAA, handling the state newsletter, and attending national conferences.

Today, Ross says, Iowa has nine women superintendents. With fewer than 100 nationwide, Iowa may lead the country in the number of women running courses.

Women, she says, have a knack for detail, which can help beautify any golf course. And, as far as men working with women, she makes one simple statement:

"If they're a MAN—that's with capital letters—they won't resent it."

—*Heide Aungst*

Introducing your new old standby.

That old standby broadcast amine turf herbicide of yours has just been made obsolete with new TURFLON* II Amine Herbicide from Dow.

Stops HTCs in the broadcast round

You see, TURFLON II does everything your old standby does, and a whole lot more. Like control those hard-to-control weeds that can emerge early and sneak through your old standby. Weeds like oxalis, ground ivy, prostrate spurge and wild violet. Weeds that keep your phone ringing and your cash register quiet.

New turf chemistry

With TURFLON II you can stop those early-emerging, hard-to-control weeds in their tracks and significantly reduce the need for spot treating later. TURFLON II does so much more than other broadcast herbicides because it contains triclopyr, the first new turf herbicide chemistry in 16 years.

Safety tested

The low volatility of the TURFLON II activated amine formulation gives you less odor to worry about. It has a proven safety record and won't migrate in the soil to the roots of ornamental plants.

So if you're tired of being let down in the broadcast round by your old standby, turn to TURFLON II this year.

TURFLON II
It's your new old standby.

DOW*

*Trademark of the Dow Chemical Company

6006

Circle No. 109 on Reader Inquiry Card

ALL SYSTEMS GREEN

The green industry is growing in all directions. An indication of this positive trend is the magnitude of chemical, equipment and seed purchases. So the state of the green industry, judging by a recent survey, is 'green and go' for 1987.

During 1986, readers of WEEDS TREES & TURF purchased almost $2.5 billion worth of chemicals, equipment and plant material for landscape care.

Most of the purchases were split between equipment and chemicals, says an independent survey done for the magazine by Readex, Inc., St. Paul, Minn. The Readex numbers closely parallel other studies like the Charles H. Kline Report released earlier this year.

Chemical purchases

The Kline statistics indicate a total market for turf and grounds pesticides of $729.6 million; Readex indicates that WT&T readers will make pesticide purchases of $678.3 million (not including seed, sod, adjuvants, wetting agents and growth regulators).

Among WT&T readers, granular fertilizer continues to be the favorite. More than 7 out of 10 landscape managers opt to use it, resulting in $262 million worth of sales. Liquid fertilizer is a distant second with 1986 sales of $31.8 million to just one-fourth of the magazine's readers.

Herbicides remain the most popular of the pesticides in the green industry. Readers bought more than $160 million worth in 1986, including almost $100 million of pre-emergents.

Fungicide sales to WT&T readers were $81 million and insecticide sales were $72 million in 1986, the Readex survey suggests.

PREDICTED EXPENDITURES FOR 1986

Chemicals, supplies	Percentage reporting	Mean	Total Readership Projection
Adjuvant-spreaders	21.8	$436	$4,260,000
Aquatic herbicides	16.2	$580	$4,200,000
Dry-applied turf fertilizer	71.7	$8,150	$262,000,000
Fungicides	49.1	$3,730	$81,800,000
Growth regulators	21.8	$427	$4,170,000
Insecticides for trees/ornamentals	42.0	$1,060	$20,000,000
Insecticides for turf	49.9	$2,330	$52,000,000
Landscape fabric for erosion control	14.8	$875	$5,810,000
Landscape fabric for weed control	16.2	$2,250	$16,300,000
Landscape structures	20.3	$2,842	$23,245,000
Liquid-applied turf fertilizer	25.6	$2,770	$31,800,000
Plant materials	58.2	$27,600	$719,000,000
Post-emergence herbicides	62.0	$2,570	$71,400,000
Pre-emergence herbicides	60.1	$3,650	$98,200,000
Sod	36.7	$6,080	$99,800,000
Soil amendments	34.2	$2,800	$42,900,000
Tree fertilizer	34.2	$911	$14,000,000
Turf seed	71.4	$2,920	$93,300,000
Wetting agents	30.2	$667	$9,020,000

Equipment purchases

Readers report owning more than 124,000 tractors, 140,000 pick-up trucks, and 398,000 mowers, as well as a long list of other items (see charts).

The pick-up truck is the most popular piece of equipment. The average reader owns almost four pick-ups. Taken as a whole, pick-up truck manufacturers gained $135 million in sales to readers of WT&T.

Likewise, more than $100 million worth of irrigation equipment sales went to our readers, including nearly $60 million worth of sprinklers. The average reader owns or has installed 362 sprinklers, two or three irrigation pumps and 22 electronic irrigation controls.

Though the most dominant piece of mowing equipment is the walk-behind rotary (six owned by the average reader) riding reels are the biggest expense. According to the Readex survey, WT&T readers purchased $42.8 million worth of them, slightly more than the $40.3 million the same readers spent on rotary riders.

Lots of plants

Not surprisingly, the biggest single expense for the typical landscape manager is for plant materials. Nearly

Toro's XP300: It picks up where the Stream Rotor leaves off.

Since Toro introduced the revolutionary Stream Rotor® sprinkler back in 1969, it has become one of the most popular sprinklers in the irrigation industry.

Now, using the same technology that has made the Stream Rotor so successful, Toro's done it again. Introducing the Toro XP300 Series. An outstanding new sprinkler with a 50% greater watering radius.

Designed for public spaces.

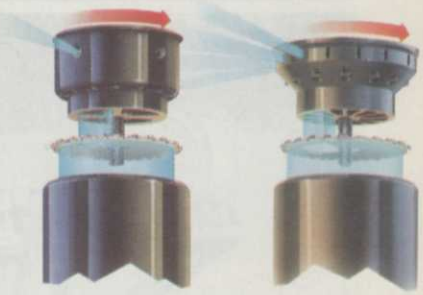
Like the Stream Rotor, our XP300 is designed with people in mind. Its quiet operation and safe, ground level installation make it ideal for high-visibility projects. Like corporate headquarters, city parks and recreational areas. Plus, it's the only gear-driven pop-up in this larger size category with multiple rotating streams that has a watering radius of up to 43 feet.

We've got you covered.

Three XP300 models give you all the coverage you'll need. A 3¾" turf pop-up. A 12" high-pop for high ground cover. And a shrub head for plant and shrub areas that don't require ground-level installation.

The XP300 offers a wide range of interchangeable Matched Precipitation Nozzles and Arc Discs, with various angles from 90° to 360°. Using each nozzle, no matter which Arc Disc you choose, you're guaranteed a matched precipitation rate for even water coverage. Which means fewer valves and controller stations, fewer pipes and fittings and fewer dollars spent.

So for your next installation, choose Toro's XP 300. It picks up where the Stream Rotor leaves off.



XP300 Stream Rotor

Toro's exclusive Arc Disc™ and rotating nozzle control the pattern of water and rate of distribution to provide matched precipitation rate.

For more information, contact your local Toro dealer, or Toro at 5825 Jasmine St., Riverside, CA 92504. (714) 688-9221.

TORO.

Excellence in Irrigation®

Circle No. 125 on Reader Inquiry Card

6 of 10 WT&T readers purchase such materials each year, for which they pay an average of $27,600. Projected to the entire WT&T readership of more than 45,000, that's an annual expense of $719 million on plant materials nationally.

More than half the respondents to the survey were involved in the following maintenance practices:

- fertilizer application (76%);
- weed control (75%);
- landscaping (70%);
- lawn care (69%);
- pesticide application (64%);
- irrigation (52%); and
- tree installation and care (52%).

Seventy-seven percent of the respondents maintain an average of 157 acres of turf yearly, or more than 5 million acres when projected to the magazine's total circulation.

In addition, nearly one-fourth of the sample maintains rights-of-way and an additional one-fourth maintains lake acreage.

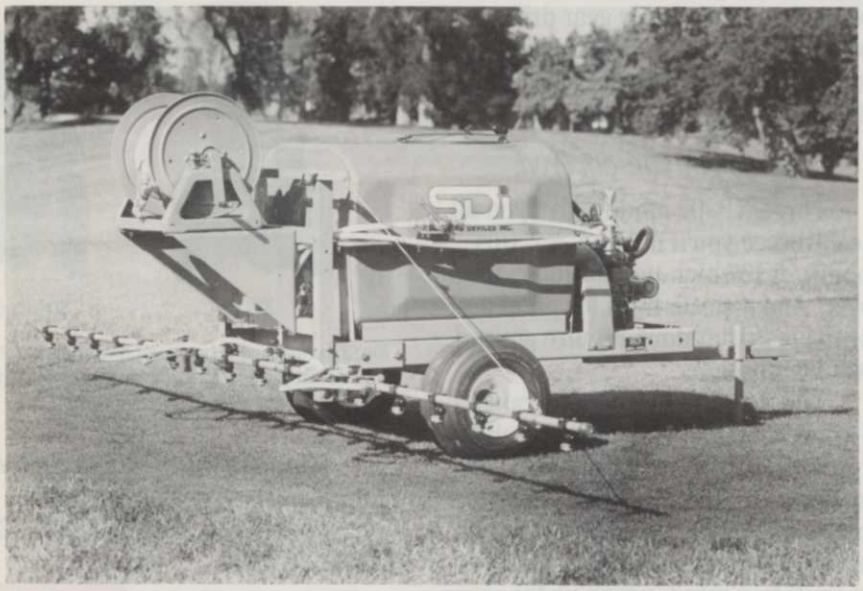
The Readex survey was based on 371 usable responses from a mailing to 500 randomly-chosen WEEDS TREES & TURF readers. Proportions based on all 371 respondents are subject to a maximum sampling error of ±4.3% at the 90% confidence level.

PREDICTED EXPENDITURES FOR 1986

Equipment	Percentage reporting	Mean	Total Readership Projection
Golf cars/utility vehicles	11.0	$5,090	$22,400,000
Irrigation systems	23.0	$3,100	$33,733,000
Pick up trucks	25.8	$6,040	$75,850,000
Riding mowers—reel	16.2	$5,920	$42,800,000
Riding mowers—rotary	32.9	$2,740	$40,300,000
Seeders	13.5	$951	$5,800,000
Soil aerifiers/corers	22.9	$1,310	$13,500,000
Spreaders	29.9	$433	$5,800,000
Tractor drawn gangs	13.7	$3,510	$21,600,000
Tractors	15.5	$4,051	$26,748,000
Walk-behind mowers—reel	10.8	$1,710	$8,230,000
Walk-behind mowers—rotary	48.0	$996	$40,300,000

SDI TURF SPRAYERS

Trouble-Free Turf Maintenance Year Round!



The most advanced spraying devices in turf care that work season after season with trouble free start-ups.

- Nationwide Service Centers •
- Non-Corrosive Materials For Long Life •
- 50 to 1,000 Gallon Tanks Available •
- 46 Models to Choose From •

A full line of spray units for Lawn, Turf, Trees and PCO. Send in for free brochure listing all types of units to do the right job for you. Remember, the right equipment goes a long way!

SEND FOR FREE BROCHURE

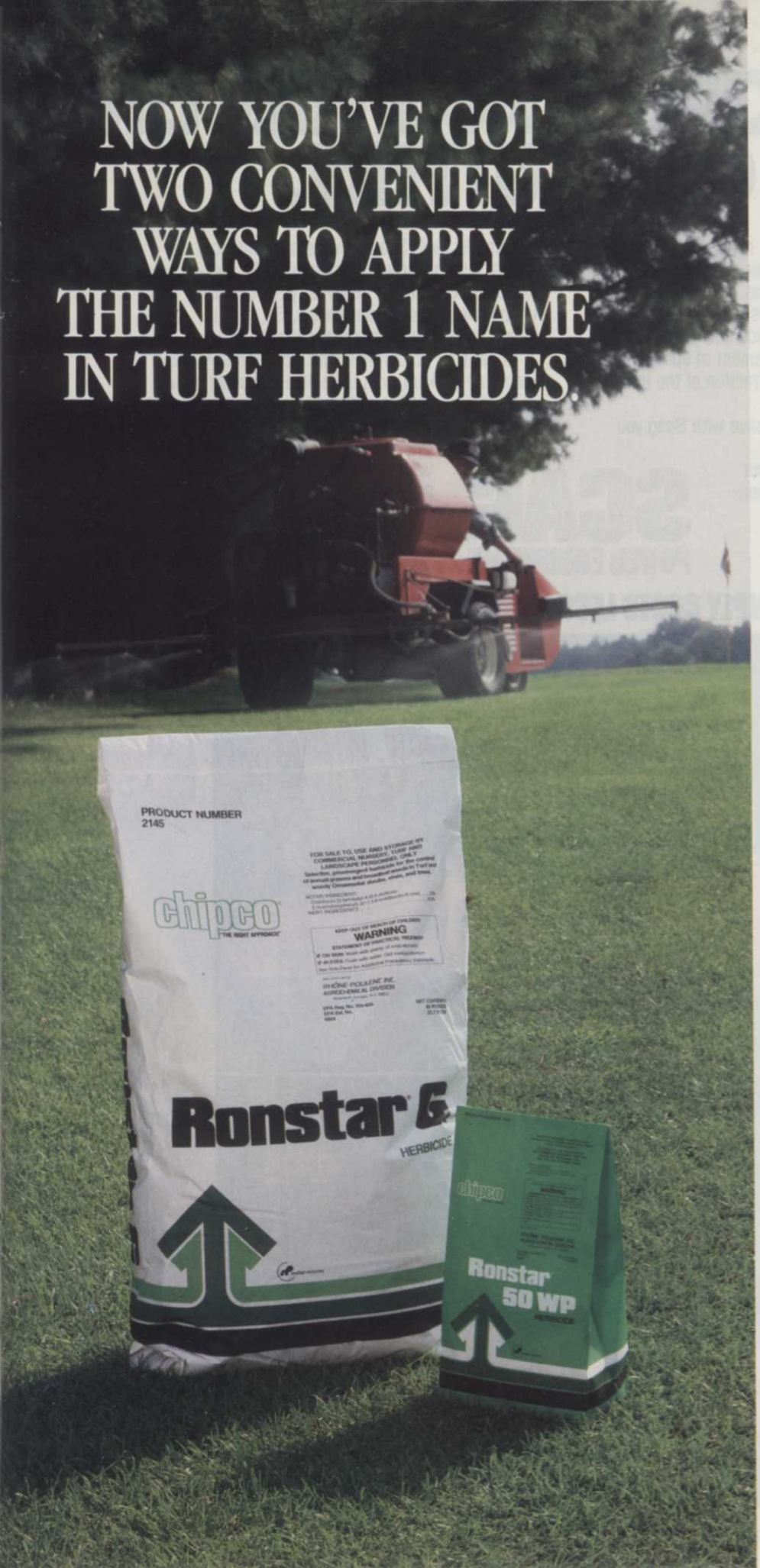
And find out why SDI is the fastest growing spraying manufacturer in America!

Spraying Devices Inc. P.O. Box 3107
Visalia, CA 93278 (209) 651-1306

Cut Maintenance In Half With SDI

Circle No. 123 on Reader Inquiry Card

NOW YOU'VE GOT TWO CONVENIENT WAYS TO APPLY THE NUMBER 1 NAME IN TURF HERBICIDES.

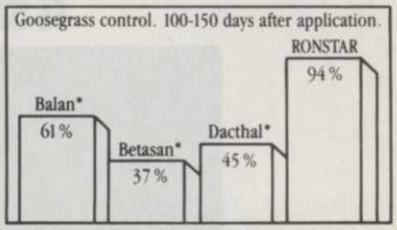


With Chipco® Ronstar® G and new Chipco Ronstar WP, problem weeds never see the light of day.

Golf course superintendents have made Chipco® Ronstar® herbicide the product of choice for pre-emergence weed control. And rightly so.

Just one application of Chipco Ronstar provides season-long control of 25 tough broadleaf and grassy weeds. Without the root pruning or leaching you get with other turf herbicides.

Plus, Chipco Ronstar still ranks as the Number 1 way to control stubborn crabgrass and goosegrass. Test results prove it.



Summary of 9 years of testing conducted by University Experiment Station and Rhone-Poulenc personnel.

And now, Chipco offers you the choice of easy-to-spread Chipco Ronstar G granules or easy-to-spray Chipco Ronstar WP wettable powder.

So start the season with Chipco Ronstar G or new Chipco Ronstar WP—the best way to keep weeds out of sight and out of mind.

Rhone-Poulenc Inc., CHIPCO Department, P.O. Box 125, Monmouth Junction, NJ 08852.

RHÔNE·POULENC

CHIPCO® RONSTAR®

HERBICIDE

Please read label carefully and use only as directed. Apply Ronstar only on turfgrass varieties included on the label.

CHIPCO® and RONSTAR® are registered trademarks of Rhone-Poulenc Inc.
*Balan is a registered trademark of Elanco.
*Betasan is a registered trademark of Stauffer Chemical Co.
*Dacthal is a registered trademark of SDS Biotech.

Circle No. 121 on Reader Inquiry Card

INTRODUCING SCAG'S FULL LINE OF COST CUTTERS.

Scag offers a full line of money-saving, low-maintenance commercial riders and walkers tough enough to handle all your jobs. Not only do Scag mowers cost up to 25% less than comparable models, their easy, self-service design allows for on-site tire changes, replacement of spindle bearings and other repairs at a fraction of the usual time and expense.

What's more, when you save with Scag you don't sacrifice performance because Scag's machines cut up to 30% faster than competitive brands. And, Scag mowers are built from the highest quality parts and materials, like oversize cast iron pulleys, heavy-duty spindle and rugged pneumatic caster wheels. So, they'll outlast as well as outperform ordinary mowers.

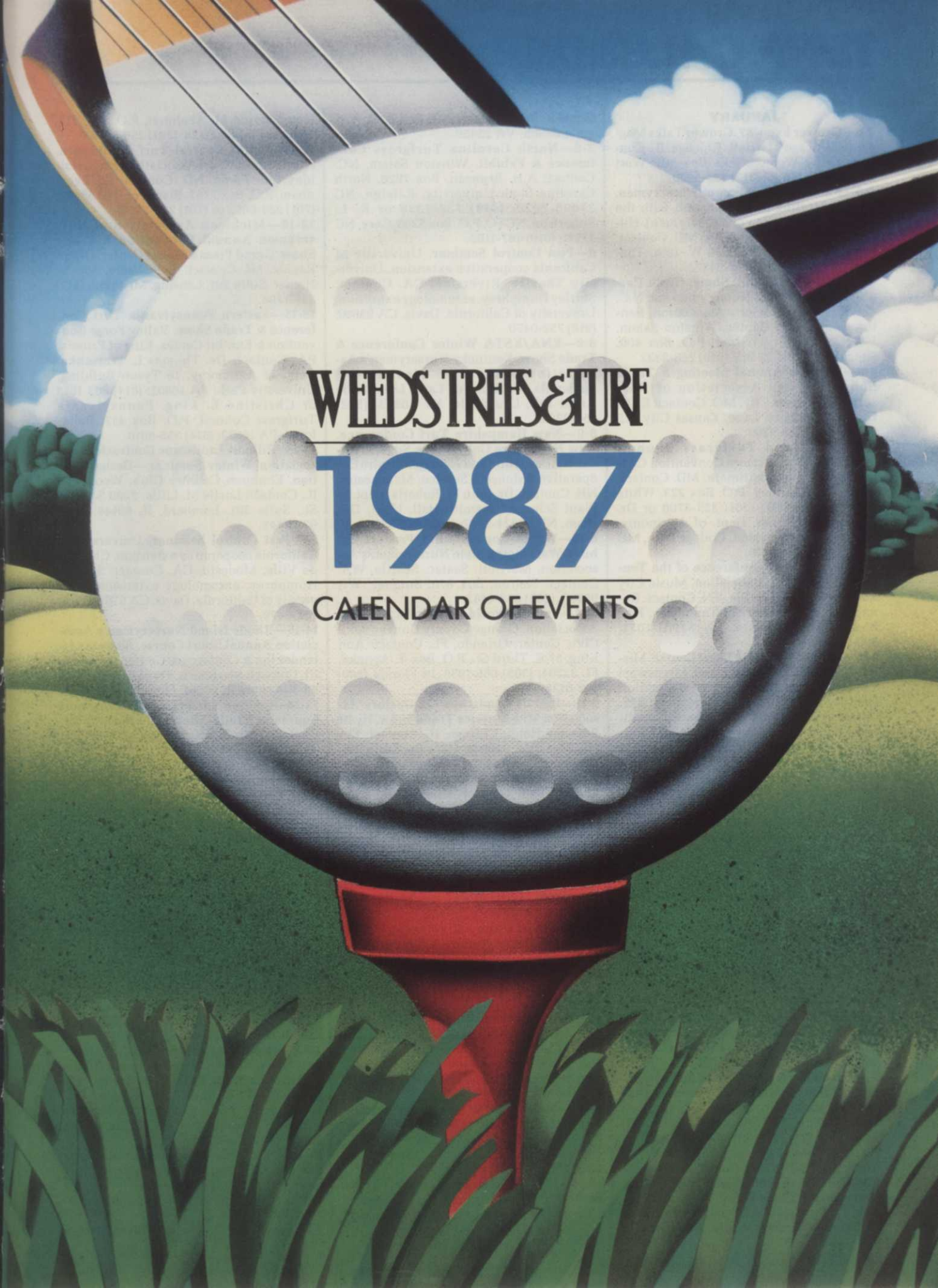
Boost your bottom line with Scag's heavy-duty riders and walkers from 8- to 18-HP models with 32 to 61 inch cutting widths. See for yourself why no mower is easier to use than Scag.

W226 N900 Eastmound Drive
Waukesha, WI 53186
Phone: (414) 544-4090

SCAG
POWER EQUIPMENT

IT SIMPLY COSTS LESS. AND CUTS MORE.

Circle No. 122 on Reader Inquiry Card


WEEDS TREES & TURF
1987
CALENDAR OF EVENTS

TURF CALENDAR

JANUARY

3-6—Grower Expo '87, Grower Talks Magazine, Chicago Marriott, Chicago, IL. Contact: Kathy Wooton, P.O. Box 501, West Chicago, IL 60185; (312) 293-5020.

4-6—Kansas Association of Nurserymen, Winter Meeting (in conjunction with the Western Association of Nurserymen), Hilton Plaza Hotel, Kansas City, MO. Contact: John Tonkin, K.A.N., 5530 W. 19th, Topeka, KS 66604; (913) 272-6437.

4-6—Green & Growin' Show, North Carolina Association of Nurserymen and N.C. Landscape Contractor's Association, Benton Convention Center, Winston-Salem, NC. Contact: Bill Wilder, P.O. Box 400, Knightsdale, NC 27545; (919) 266-3322.

4-6—Western Annual Meeting & Trade Show, Western Association of Nurserymen, Kansas City, MO. Contact: Ed G. Gray, 2215 Forest Lane, Kansas City, KS 66106; (913) 236-5203.

5-7—Maryland Turfgrass Council Turfgrass '87, Baltimore Convention Center Festival Hall, Baltimore, MD. Contact: Cheryl A. Gaultney, P.O. Box 223, White Marsh, MD 21162; (301) 335-3700 or Dr. Thomas R. Turner, Dept. of Agronomy, University of Maryland, College Park, MD 20742; (301) 454-3716.

5-7—21st Annual Conference of the Tennessee Turfgrass Association, Music City Rodeway Inn, Nashville, TN. Contact: DonnieCallis, University of Tennessee, P.O. Box 1071, Knoxville, TN 37901-1071; 800-342-1016.

5-9—Annual Turfgrass Short Course, Mississippi State University and Mississippi Turfgrass Association, Bost Extension Center, MSU Campus, Starkville, MS. Contact: Dr. George Euel Coats, Coordinator, Drawer PG, Mississippi State University, MS 39762; (601) 325-2608.

6—Pest Control Seminar, University of California Extension, Salinas Convention Center, Salinas, CA. Contact: Shirley Humphrey, University of California, Davis, CA 95616; (916) 752-0470.

6-8—Indiana Association of Nurserymen Annual Winter Conference, Adam's Mark Hotel, Indianapolis, IN. Contact: Donald L. Schuder, Dept. of Entomology, Purdue University, W. Lafayette, IN 47907; (317) 494-4561.

6-9—New York State Nurserymen's Association Annual Meeting, Concord Hotel, Kiamesha Lake, NY. Contact: Margaret Herbst, 310 Madison Ave., New York, NY 10017; (212) 697-2752.

6-9—Connecticut Nurserymen's Eastern Regional Trade Show, Concord Hotel, Kiamesha Lake, NY. Contact: Larry Carville, Room 109, 30 Lafayette Square, Vernon, CT 06066; (203) 872-2095.

7—Metropolitan Golf Course Superintendents Winter Educational Seminar, Tappan Zee Motor Inn, Nyack, NY. Contact: Bruce Cadenelli, Hollywood Golf Club, Deal, NJ 07723; (201) 531-3609 or Ted Horton, Westchester Country Club, Rye, NY 10580; (914) 967-6000 ext. 360.

7-8—Tidewater Professional Horticulture Conference & Trade Show, Tidewater Virginia Nurserymen Association, Pavillion Conference Center, Virginia Beach, VA. Contact: Beth Wright, P.O. Box 6291, Virginia Beach, VA 23456.

7-9—North Carolina Turfgrass Conference & Exhibit, Winston Salem, NC. Contact: A.H. Bruneau, Box 7620, North Carolina State University, Raleigh, NC 27695-7620; (919) 737-2326 or R. L. Robertson, NCTC, P.O. Box 5395, Cary, NC 27511; (919) 467-1162.

8—Pest Control Seminar, University of California cooperative extension, University Theatre, Riverside, CA. Contact: Shirley Humphrey, entomology extension, University of California, Davis, CA 95616; (916) 752-0470.

8-9—KNA/KSTA Winter Conference & Trade Show, Kentucky Nurserymen's Association, Executive West Hotel, Louisville, KY. Contact: Larry Lose, 10105 Afton Rd., Louisville, KY 40223; (502) 454-8296.

8-9—New Hampshire Turf Conference, New Hampshire Golf Course Superintendents Association and New Hampshire Cooperative Extension Service, Manchester, NH. Contact: Dr. John M. Roberts, Dept. of Plant Science, Nesmith Hall, UNH, Durham, NH 03824-3597; (603) 862-3202.

8-10—WSNA Convention & Product Exhibit, Washington State Nurserymen's Association, Marriott, Seatac, Seattle, WA. Contact: Sharon, Box 670, Sumner, WA 98390; (206) 863-4482.

9-11—Foliage World '87, Florida Foliage Association, Orange County Convention/Civic Center, Orlando, FL. Contact: Ann King, 57 E. Third St., P.O. Box Y, Apopka, FL 32704; (305) 886-1036, in Florida (800) 342-0138.

9-11—Illinois Landscape Contractors Association Mid-America Trade Show, Hyatt Regency Hotel, Chicago, IL. Contact: Lucile M. Little, 2200 S. Main St., Suite 301, Lombard, IL 60148; (312) 932-8443.

9-11—Mid-America Horticultural Trade Show, Hyatt Regency, Chicago, IL. Contact: Donn Sanford, Mid-Am Trade Show, 4300-L Lincoln Ave., Rolling Meadows, IL 60008; (312) 359-8160.

10-11—Arkansas Nurserymen's Annual Seminar & Plant Auction, Arlington Hotel, Hot Springs, AR. Contact: Leah Sylar, P.O. Box 55295, Little Rock, AR 72225; (501) 225-0029.

10-11—Louisiana/Mississippi Nurserymen's Short Course & Trade Show, Bellemont Motel, Baton Rouge, LA. Contact: Dr. Warren A. Meadows, 4560 Essen Lane, Baton Rouge, LA 70809; (504) 766-3471.

12—Pest Control Seminar, University of California cooperative extension, Holiday Inn, Visalia, CA. Contact: Shirley Humphrey, entomology extension, University of California, Davis, CA 95616; (916) 752-0470.

12-14—North Central Turfgrass Association's Annual Meeting, Holiday Inn, Fargo, ND. Contact: Ed Evernham, Box 5031, 2001 Great Northern Dr., Fargo, ND 58102; (701) 232-7238

12-14—Mid-Atlantic Nurserymen's Trade Show, Maryland, Virginia & West Virginia Nurserymen's Associations, Baltimore Convention Center, Baltimore, MD. Contact: Carville M. Akehurst, P.O. Box 314, Perry Hall, MD 21128; (301) 256-6474.

12-14—North Central Turf Conference, North Central Turf Association, Fargo Holiday Inn, Fargo, ND. Contact: Ed Evernham, P.O. Box 7262, Bismarck, ND 58502; (701) 222-0652 or (701) 258-2950.

12-15—Michigan Association of Nurserymen Annual Convention & Trade Show, Grand Plaza & Grand Center, Grand Rapids, MI. Contact: Rick Seely, 500 N. Homer, Suite 201, Lansing, MI 48912; (517) 337-1796.

13-15—Eastern Pennsylvania Turf Conference & Trade Show, Valley Forge Convention & Exhibit Center, King of Prussia, PA. Contact: Dr. Thomas L. Watschke, Dept. of Agronomy, 16 Tyson Building, University Park, PA 16802; (814) 863-1613 or Christine E. King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA 16823; (814) 355-8010.

13-15—Illinois Landscape Contractors Association Winter Seminar—Design Section, Elmhurst Country Club, Wooddale, IL. Contact: Lucile M. Little, 2200 S. Main St., Suite 301, Lombard, IL 60148; (312) 932-8443.

14—Pest Control Seminar, University of California cooperative extension, Chateau de Ville, Modesto, CA. Contact: Shirley Humphrey, entomology extension, University of California, Davis, CA 95616; (916) 752-0470.

14-15—Rhode Island Nurserymen's Association Annual Short Course, Sheraton Islander Inn & Conference Center, Newport, RI. Contact: Marlene L. Franklin, P.O. Box 99, Kingston, RI 02881; (401) 789-6481.

14-16—Georgia Nursery Association Short Course & Trade Show, Charleston, SC. Contact: Jake Tinga, 190 Spring Tree Rd., Athens, GA 30605-2418.

15—Pest Control Seminar, University of California cooperative extension, Bonanza Inn, Yuba City, CA. Contact: Shirley Humphrey, entomology extension, University of California, Davis, CA 95616; (916) 752-0470.

15-16—Rocky Mountain Regional Turf Conference, Rocky Mountain Turfgrass Association, Lory Student Center, Colorado State University, Fort Collins, CO. Contact: Jack D. Butler, Dept. of Horticulture, Colorado State University, Fort Collins, CO 80523; (303) 491-7070.

15-16—San Diego Xeriscape (low water usage), Atlantis Restaurant, San Diego, CA. Contact: Brad Monroe or Helen Stone, Cuyamaca College, Ornamental Horticulture Dept., El Cajon, CA 92020; (619) 464-1980 ext. 262.

15-17—Georgia/South Carolina Nurserymen's Short Course & Trade Show, Charleston Place Hotel, Charleston, SC. Contact: J.P. Fulmer, 321 Berkeley Dr., Clemson, SC 29631; (803) 654-2446 or Jake Tinga, 190 Springtree Rd., Athens, GA 30605; (404) 548-1257.

18-20—N.Y. State Arborists Annual Convention, ISU Chapter, Hotel Marriott, Albany, NY. Contact: Margaret Herbst, 310 Madison Ave., New York, NY 10017; (212) 986-1160.

22—Maryland Arborists Association's

EEGER BEEVER CHIPPER

--- Standard For The Industry ---

Price Rollback On The Industry's Most Popular Chipper !

~~$12,550~~ WAS **$9,995** NOW

With Ford Model 423
Gasoline Engine

~~$16,475~~ WAS **$12,995** NOW

With Cummins Model 4B3.9
Diesel Engine

• SAFER • QUIETER • MORE ECONOMICAL •

See Us At Arbor Expo!

Prices are F.O.B. factory and do not include local taxes or prep charges. Offer expires Dec. 31, 1986

MORBARK INDUSTRIES INC.

P.O. Box 1000 • Winn, Michigan 48896 • (517) 866-238

Circle No. 117 on Reader Inquiry Card

TURF CALENDAR

Seminar & Recertification Day, Snyder's Willow Grove Restaurant, Linthicum Heights, MD. Contact: Mathew C. Anacker, secretary, P.O. Box fi21310, Pikesville, MD 21208-0310; (301) 486-4706.

19-23—Golf Course Association Conference & Award of Merit Banquet, Hilton Hotel, Walt Disney World, Orlando, FL. Contact: Curt Walker, Golf Course Association, 8030 Cedar Ave., Suite 228, Minneapolis, MN 55420; (612) 854-8482.

20-22—New Jersey Association of Nurserymen's Annual Convention and Trade Show, Caesars Hotel/Casino, Atlantic City, NJ. Contact: Larry D. Little Jr., Secretary, P.O. Box 231, 233 Blake Hall, New Brunswick, NJ 08903; (201) 828-2325.

20-22—Landscape Ontario Horticultural Trades Association, Congress '87, The Sheraton Centre, Toronto, Canada. Contact: Jim Bradley, Manager, Communications, 1293 Matheson Blvd., Mississauga, Ontario, Canada L4W 1R1; (416) 629-1184.

20-22—Massachusetts Horticultural Congress, Mass. Nurserymen's Association, Mass. Arborists Association and Cooperative Extension Service, Dunfey's Hotel, Hyannis, MA. Contact: Deborah M. Fanning, coordinator, 715 Boylston St., Boston, MA 02116; (617) 266-6800.

21-22—Professional Turf & Landscape Exposition, Northern California Turfgrass Council, Santa Clara Convention Center, Santa Clara, CA. Contact: Wanda M. Sarsfield, P.O. Box 268, Lafayette, CA 94549; (415) 283-6162.

21-23—Virginia Turfgrass Conference & Trade Show, Marriott, Richmond, VA. Contact: Dr. J.R. Hall III, Virginia Tech University, Cooperative Extension Service, Dept. of Agronomy, 426 Smith Hall, Blacksburg, VA 24061; (703) 961-5797.

22—Delaware Winter Nursery Meeting, Delaware Association of Nurserymen and Delaware Cooperative Extension, Sheraton, Dover, DE. Contact: Susan Barton, Townsend Hall, University of Delaware, Newark, DE 19717-1303.

22-24—Tropical Plant Industry Exhibition, Florida Nurserymen & Growers Association, Coconut Grove Exhibition Center, Coconut Grove, FL. Contact: Susan Stoun, 5401 Kirkman Rd., Suite 650, Orlando, FL 32819, (305) 345-8137.

23—National Council for Interior Horticultural Certification Exam, TPIE Coconut Grove-Miami, FL. Contact: Norma A. Gammon, 115 Abbot Street, Andover, MA 01810; (617) 475-4433.

25—National Council for Interior Horticultural Certification Regional Exam: Los Angeles, New York, Dallas, San Antonio, Minneapolis, Columbus, Houston, Boston. Contact: Norma A. Gammon, 115 Abbot Street, Andover, MA 01810; (617) 475-4433.

25-28—California Weed Conference, Red Lion Inn, San Jose, CA. Contact: Stan Walton, Box 3021, El Maciero, CA 95618; (916) 756-0123.

26-28—University of Tennessee Turf Winter Short Course, Ellington Plant Sciences Building Auditorium, University of Tennessee, Knoxville, TN. Contact: Lloyd Callahan, University of Tennessee, P.O. Box 1071, Knoxville, TN 37901-1071.

26-29—Central Environmental Nursery Trade Show "Cents" & O.S.U. Nursery Short Course, Ohio Nurserymen's Association, Ohio Center/Hyatt Regency, Columbus, OH. Contact: Bill Slater, Ohio Nurserymen's Association, 2021 E. Dublin-Granville Rd., Suite 185, Columbus, OH 43229; (614) 431-2452.

26-Feb. 2—58th International Golf Course Conference & Show, Golf Course Superintendents Association of America, Phoenix, AZ. Contact: GCSAA Headquarters, 1617 St. Andrews Dr., Lawrence, KS 66046; (913) 841-2240.

27—Professional Turf and Landscape Conference, N.Y. Turf & Landscape Association, Cornell University Cooperative Extension, Long Island Landscape Gardeners Association, Yonkers Raceway, Route 87, Yonkers, NY. Contact: John F. Cockerill, 475 Central Park Ave., White Plains, NY 10606; (914) 693-3792.

27-29—Illinois Landscape Contractors Association Winter Seminar—Lecture Section, Elmhurst Country Club, Wooddale, IL. Contact: Lucile M. Little, 2200 S. Main St., Suite 301, Lombard, IL 60148; (312) 932-8443.

28-29—Connecticut Nurserymen's Annual Short Course, The Treadway Cromwell Hotel, Cromwell, CT. Contact: Larry Carville, Room 109, 30 Lafayette Square, Vernon, CT 06066; (203) 872-2095.

28-30—Iowa Nurserymen's Association Convention & Trade Show, Savery Hotel Convention Center, Des Moines, IA. Contact: Marge LePorte, 7261 N.W. 21st St., Ankeny, IA 50021; (515) 289-1790.

29—Connecticut Tree Protective Association Annual Meeting, Aqua-Turf, Plantsville, CT. Contact: Oscar P. Stone, CTPA, P.O. Box 344, New Haven, CT 06513-0344.

31—Sports Turf Managers' Association Educational Conference, Hyatt Regency, Phoenix, AZ. Contact: Kent Kurtz, 1458 North Euclid Ave., Ontario, CA 91764; (714) 984-4675 or 869-2176.

31-Feb. 1—Alabama Nurserymen's Association Trade Show & Annual Meeting, The Admiral Semmes Hotel, Mobile, AL. Contact: Judy P. Copeland, P.O. Box 9, Auburn, AL 36831-0009; (205) 887-6916.

31-Feb. 2—West Horticultural Exposition, Salt Palace Convention Center, Salt Lake City, UT. Contact: Crossroads of the West Horticultural Exposition, 26 Pine St., Dover, DE 19901; (302) 736-6781.

FEBRUARY

1—STMA Sports Turf Tour, Phoenix, AZ. Contact: Kent Kurtz, 1458 North Euclid Ave., Ontario, CA 91764; (714) 984-4677 or 869-2176.

1-4—Southwest Park & Recreation Training Institute, Park Administration Dept., Texas Tech University, Lake Texoma Lodge, Kingston, OK. Contact: Mickey Carter, Director of Parks, El Paso County Parks Dept., 1045 W. Rio Grande, Colorado Springs, CO 80506; (303) 520-6375.

1-5—NLA/GCA Management Clinic, American Association of Nurserymen, National Landscapers Association, Garden Centers of America, Louisville, KY. Contact: Dave Hamilton or Patrick Redding, 1250 I St. NW, Suite 500, Washington, DC 20005; (202) 789-2900.

2-3—Michigan Recreation & Park Association Trade & Travel Show, Hyatt Regency, Dearborn, MI. Contact: Michigan Recreation & Park Association, 2722 E. Michigan Ave., Suite 201, Lansing, MI 48912.

2-4—Colorado Nursery Trade Show & Conference, Denver Merchandise Mart, Expo Hall, Denver, CO. Contact: Cary G. or Judy M. Hall, 10775 N. 65th St., Longmont, CO 80501; (303) 447-2828.

2-4—American Sod Producers Association's Midwinter Conference & Show, The Diplomat Hotel, Hollywood, FL. Contact: Douglas Fender, ASPA, 4415 West Harrison, Hillside, IL 60162-1903; (312) 449-2890.

2-5—Pennsylvania Allied Industries Nursery Conference, Pennsylvania Nurserymen's Association; Penn State University & Cooperative Extension Service, Keller Conference Center, State College, PA. Contact: Dr. Larry J. Kuhns, Dept. of Horticulture, Penn State University, 103 Tyson Building, University Park, PA 16802; (814) 863-2197.

2-4—ASPA Midwinter Conference, American Sod Producers Association, Diplomat Hotel, Hollywood, FL. Contact: Douglas H. Fender, ASPA, 4415 W. Harrison, Suite 309-C, Hillside, IL 60162; (312) 449-2890.

3-4—The New England Nurserymen's Annual Convention & Trade Show, The Copley Plaza Hotel, Boston, MA. Contact: Larry Carville, Room 109, 30 Lafayette Square, Vernon, CT 06066; (203) 872-2095.

3-5—Weed Science Society of America Annual Meeting, St. Louis, MO. Contact: Carl Johnson, 309 W. Clark St., Champaign, IL 61820; (217) 356-3182.

5—Rhode Island Nurserymen's Association Annual Meeting, Sheraton Islander Inn & Conference Center, Newport, RI. Contact: Marlene L. Franklin, P.O. Box 99, Kingston, RI 02881; (401) 789-6481.

5-8—American Society of Landscape Architects Professional Practice Institute, Radisson Hotel, San Diego, CA. Contact: Pam Jensen, 1733 Connecticut Ave., NW, Washington, DC 20009; (202) 466-7730.

8-12—National Arborists Association Annual Meeting, Marriott Marco Beach Resort, Marco Island, FL. Contact: Robert Felix, EVP, 174 Rt. 101, Bedford, NH; (603) 472-2255.

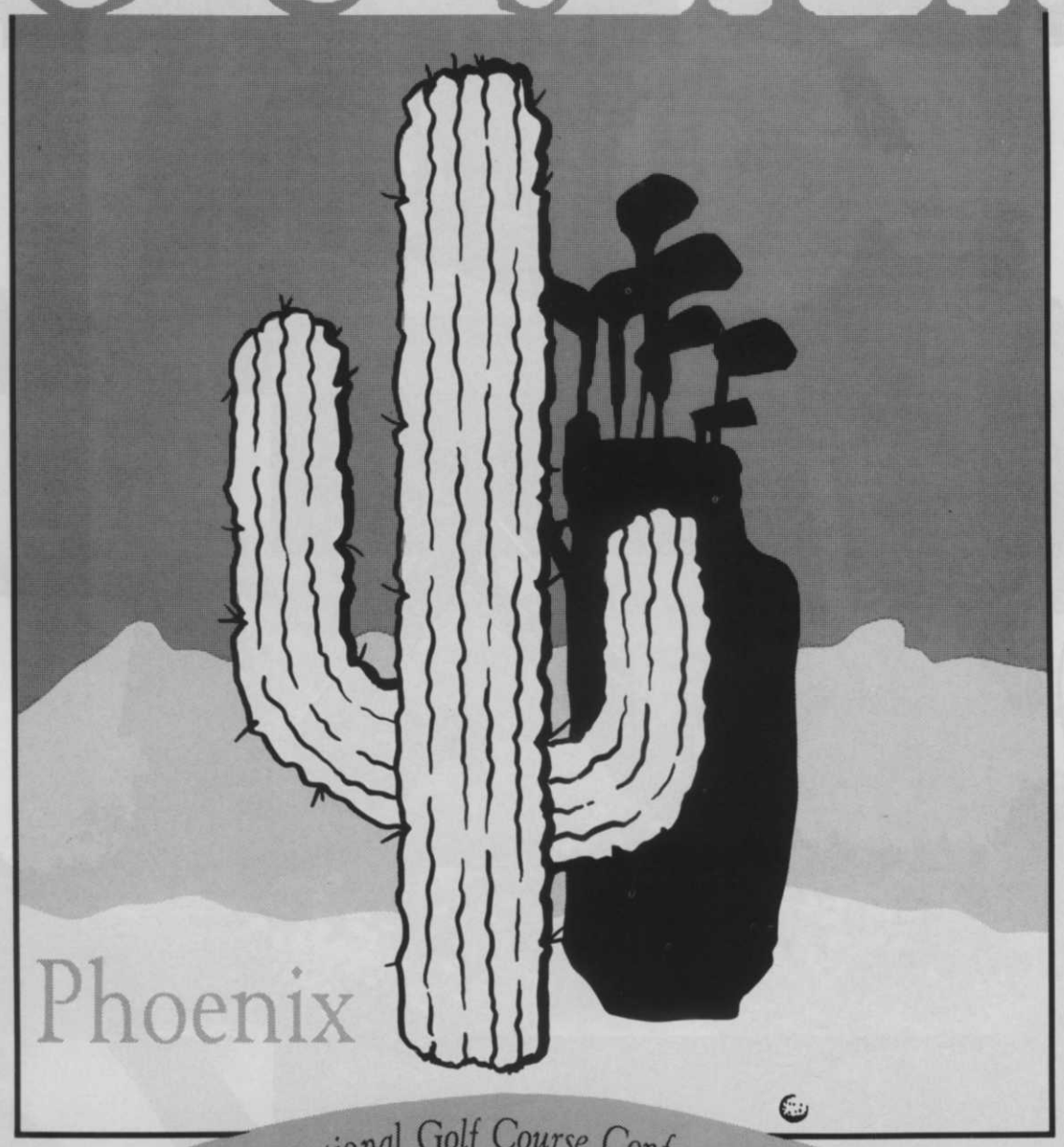
11—Small Engine Clinic, University of Illinois Cooperative Extension Service, DuPage County Fairgrounds, IL. Contact: James E. Schuster, Senior 2, Extension Adviser, Horticulture; (312) 682-7486.

11-12—New England Landscape Industry Exposition, Associated Landscape Contractors of Massachusetts, Sheraton Inn, Foxborough, MA. Contact: Virginia Wood, 1357 Washington St., West Newton, MA 02165; (617) 964-0452.

12—Professional Turf & Landscape Conference, Connecticut Grounds Keepers Association, Hartford Civic Center, Hartford, CT. Contact: Anthony D. Penkrat, 23 Atwater Street, West Haven, CT 06516; (203) 934-3103.

13-15—Nebraska Turfgrass Conference,

GCSAA



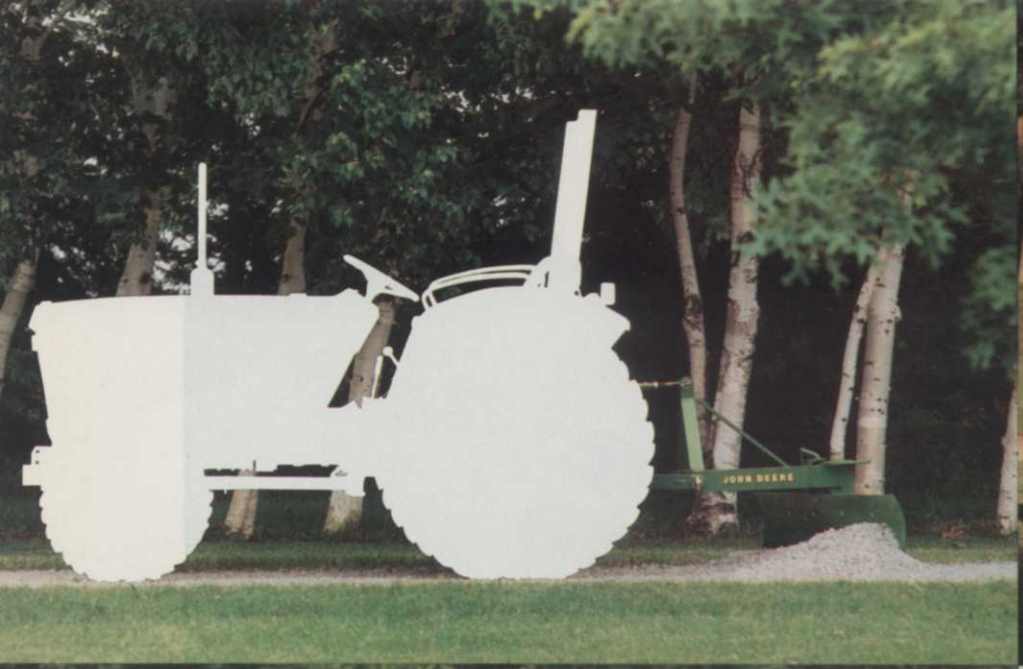
58th International Golf Course Conference and Show

January 26 – February 2, 1987
Phoenix Civic Plaza
Phoenix, Arizona

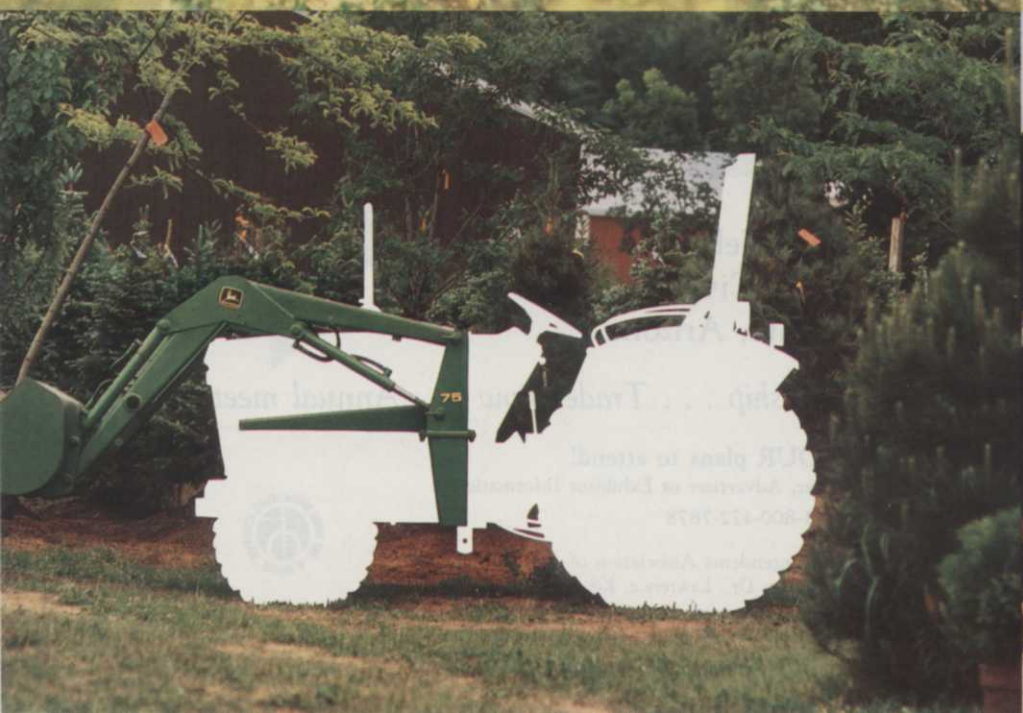
. . . 29 seminars . . . Golf championship . . . Trade show . . . Annual meeting

Make YOUR plans to attend!
For Conference, Seminar, Advertiser or Exhibitor Information
1-800-472-7878

Golf Course Superintendents Association of America
1617 St. Andrews Dr., Lawrence, KS 66046


JOHN DEERE

75
JOHN DEERE B


75

THE RIGHT TOOL FOR THE JOBS

A John Deere compact utility tractor fits perfectly into almost any job.

With the right implement (and we offer over 50), you can split logs, blow snow, dig trenches, grade roads, cut weeds, build fences, pull stumps, and haul anything, quickly and easily.

And of course, you can also mow grass.

But while any tractor can boast versatility, nobody can talk quality and dependability the way John Deere can. We make six different models ranging from 17 to 37 horsepower (14.5 to 33 PTO hp). And we make them all tough.

They've all got heavy-duty diesel engines and rugged sliding-gear transmissions. To keep them going strong year after year. They've also got differential lock and optional mechanical front-wheel drive to make the going easier on slopes, banks and other inconvenient places where grass thrives but tractors often fail.

For more information about our gear-driven compact utility tractors (or about our new models with hydrostatic drive), write John Deere, Dept. 67/79, Moline, Illinois 61265. Or call 800-447-9126 toll free (800-322-6796 in Illinois) for the name of the dealer nearest you.

Check out a John Deere compact utility tractor today. Because if you've got a lot of different jobs to do, you don't need a lot of different tools, you just need the right one.

Nothing Runs Like a Deere®

Circle No. 108

JOHN DEERE

1837-1987 150

TURF CALENDAR

Holiday Inn Central, Omaha, NE. Contact: Don Ellerbee, executive director, Nebraska Turfgrass Foundation, 209 W. 9th, Hastings, NE 68901; (402) 463-5418.

14-19—American Society of Golf Course Architects Annual Meeting, Royal Lahaina, Maui, HI. Contact: Paul Fullmer, 221 N. LaSalle St., Chicago, IL 60601; (312) 372-7090.

16-17—Nebraska Association of Nurserymen's Annual Winter Meeting & Trade Show, Cornhusker Hotel, Lincoln, NE. Contact: Carol Westfall, P.O. Box 6306, Lincoln, NE 68506; (402) 423-4556.

17-19—Nebraska Weed Control Association Conference, Nebraska Weed Control Authorities, Holiday Inn, North Platte, NE. Contact: Jean Drawbaugh, 2921 W. Stolley Park Rd., Grand Island, NE 68801; (308) 381-5097.

18—The Annual Grounds Maintenance Short Course, South Carolina Landscape & Turfgrass Association, Sheraton Columbia NW, Columbia, SC. Contact: (registration) Tom Rapp, City of Aiken, P.O. Box 2354, Aiken, SC 29802; (803) 649-2504; (exhibitors) Gerry Bearman, Porter Brothers Inc., P.O. Box 807, Bluffton, SC 29910; (803) 757-3900.

18-19—Southwest Athletic Turf Clinic & Trade Show, Will Rogers Memorial Complex, Fort Worth, TX. Contact: Harold E. Clark, Athletic Turf Association, Inc., P.O. Box 1114, Hurst, TX 76053; (817) 282-4965.

18—Target Specialty Product's Annual Seminar & Exhibit, San Jose Convention Center, San Jose, CA. Contact: Marketing Communications Dept., P.O. Box 1117, Cerritos, CA 90702; (213) 865-9541 or (714) 821-9020.

18-20—Iowa Turfgrass Conference, Iowa Turfgrass Institute & Iowa State University, Des Moines Convention Center, Des Moines, IA. Contact: Dr. Michael Agnew, 105 Horticulture Building, Iowa State University, Ames, IA 50011; (515) 294-0027.

20—Target Specialty Product's Annual Seminar & Exhibit, Fresno Hilton, Fresno, CA. Contact: Marketing Communications Dept., P.O. Box 1117, Cerritos, CA 90702; (213) 865-9541 or (714) 821-9020.

21-22—Tampa Bay Horticultural Trade Show, Tampa Bay Wholesale Growers, Florida State Fairgrounds, Tampa, FL. Contact: Bette S. Walker, 8807 Roberts Rd., Odessa, FL 33556; (813) 920-4393.

23-24—Wisconsin Landscape Federation Annual Conference, Interlaken Resort, Lake Geneva, WI. Contact: Joe Phillips or Doris Raffaele, 5645 S. 108th St., Hales Corners, WI 53130; (414) 529-4705.

23-24—Arboriculture, Shade Tree Symposium, Americana Host Farm Resort, Lancaster, PA. Contact: Sara Attig, 1321 Squire Dr., Ambler, PA 19002; (215) 643-0413.

23-25—South Dakota Nurserymen's Association Annual Conference & Trade Show. Contact: Bruce R. Ellingson, 3309 E. 10th St., Sioux Falls, SD 57103; (605) 334-4767.

24—Target Specialty Product's Annual Seminar & Exhibit, Hyatt Regency, Phoenix, AZ. Contact: Marketing Communications Dept., P.O. Box 1117, Cerritos, CA 90702; (213) 865-9541 or (714) 821-9020.

24-26—Western Pennsylvania Turf Conference & Trade Show, Pittsburgh Expo Mart/Marriott Hotel, Monroeville, PA. Contact: Henry F. Meinert, Jr., Meinert Brothers Landscaping, 325 Dorseyville Rd., Pittsburgh, PA 15215l; (412) 963-8801 or Christine E. King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA 16823; (814) 355-8010.

26-27—Erosion Control: You're Gambling Without It., International Erosion Control Association, John Ascuaga's Nugget, Sparks, NV. Contact: Executive Director, P.O. Box 195, Pinole, CA 94564-0195, (415) 223-2134.

26-27—Landscape Industry Conference & Trade Show, Associated Landscape Contractors of Colorado, The Regency Hotel, Denver, CO. Contact: C. Diane Matt, 3895 Upham St., Suite 150, Wheat Ridge, CO 80033; (303) 425-4862.

27-28—1987 Florida Agribusiness Computer Short Course & Trade Show, University of Florida Reitz Union, Gainesville, FL. Contact: IFAS Conferences & Institutes, 1041 McCarty Hall, University of Florida, Gainesville, FL 32611; (904) 392-5930.

27-28—Target Specialty Product's Annual Seminar & Exhibit, Queen Mary, Long Beach, CA. Contact: Marketing Communications Dept., P.O. Box 1117, Cerritos, CA 90702; (213) 865-9541 or (714) 821-9020.

MARCH

2-4—Midwest Regional Turf Conference, Stewart Center, Purdue University, West Lafayette, IN. Contact: Dr. Clark Throssell, 2-443 Lilly Hall, Purdue University, West Lafayette, IN 47907; (317) 494-4785.

3-5—Landscape Exposition, O'Hare Exposition Center, Rosemont, IL. Contact: Dawn Pratt, HBJ Expositions & Conferences, P.O. Box 5555, 50 Washington St., Norwalk, CT 06854; (800) 243-2815.

3-5—Horticultural/Grounds Maintenance Seminar, University of Illinois Cooperative Extension Service, DuPage County Fairgrounds, IL. Contact: James E. Schuster, Senior 2, Extension Adviser, Horticulture; (312) 682-7486.

8-11—1987 Canadian Turfgrass Conference, Canadian Golf Superintendents Association, Saint John Trade & Convention Center, Toronto, Ontario, Canada. Contact: Mary Gurney, Conference Coordinator, CGSA, 698 Weston Rd., Suite 32, Toronto, Ontario, CANADA M6N 3R3; (416) 767-2550.

11—Professional Turf & Plant Conference, Nassau/Suffolk Landscape Gardeners Association, Nassau Veterans Memorial Coliseum. Contact: Walter Austin, 20 Robin Hill Place, Brentwood, NY 11717; (516) 231-9840.

12—Wildflower Identification Seminar, National Wildflower Research Center, Austin, TX. Contact: Pam Jones, National Wildflower Research Center, 2600 FM 973 North, Austin, TX 78725; (512) 929-3600.

13-14—Trees for Nebraska Conference, University of Nebraska, Lincoln, NE. Contact: Dave Mooter, Douglas County Extension Office, 8015 W. Center Rd., Omaha, NE 68124; (402) 444-7804.

18-19—Reinders Turf Conference, Reinders Bros., Inc., Waukesha County Expo Center, WI. Contact: Ed Devinger, 13400 Watertown Plank Rd., Elm Grove, WI 53122; (414) 786-3300.

23—Profitably Managing Landscape Dollars, University of California extension, University Theater, U.C. Riverside, Riverside, CA. Contact: Dick Maire or Ann Richwine, University Extension, Bannockburn, University of California, Riverside, CA 92521; (714) 787-4102.

25-27—Missouri Park & Recreation Association Annual Conference, Tan-Tar-A Resort, Lake Ozark, MO. Contact: David W. Ostlund, MPRA, 1203 Missouri Blvd., Jefferson City, MO 65101; (314) 636-3828.

27-29—Hawaii Association of Nurserymen Plant Sale, Neal Blaisdell Center, Honolulu, HI. Contact: Mordecai Hudson, P.O. Box 293, Honolulu, HI 96809; (808) 833-3369.

APRIL

5-9—Menninger Flowering Tree Conference, Edwin A. Menninger Foundation, Quality Inn, Cypress Gardens, FL. Contact: Jack Siebenthaler, P.O. Box 6524, Clearwater, FL 33518; (813) 446-3356.

5-9—Southern Tree Workshop, Edwin A. Menninger Foundation, Quality Inn, Cypress Gardens, FL. Contact: Jack Siebenthaler, P.O. Box 6524, Clearwater, FL 33518; (813) 446-3356.

9-11—1987 CCLA Conference & Trade Show, California Council of Landscape Architects, Sheraton Harbor Island East Hotel, San Diego, CA. Contact: Brad Walker, CCLA, 1121 L Street, fi500, Sacramento, CA 95814.

13-14—Southeastern Turfgrass Conference, Georgia Coastal Plain Experiment Station with USGA Green Section & Southern Golf Association, Tifton, GA. Contact: Dr. Glenn W. Burton, Dept. of Agronomy, Coastal Plain Experiment Station, Tifton, GA 31793; (912) 386-3353.

24-25—Texas Wildflower Day, Texas Women's University, Denton, TX. Contact: Dr. Robert Collier, chairman, P.O. Box 22675-TWU Station, Denton, TX 76204; (817) 898-3326.

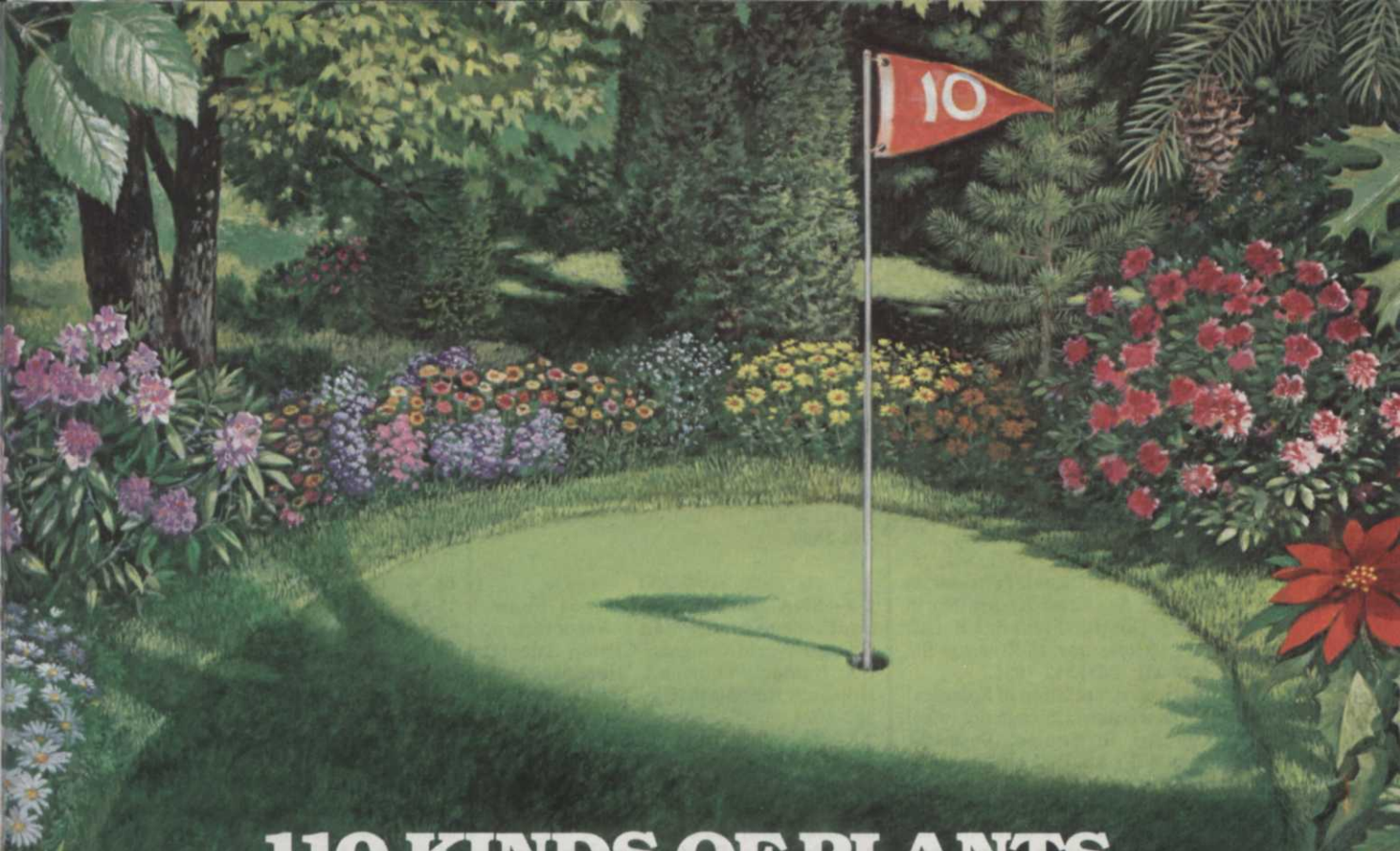
27-29—Turf & Landscape Institute, Southern California Turfgrass Council, Anaheim Convention Center, Anaheim, CA. Contact: Ed McNeill, 2492 E. Mountain St., Pasadena, CA 91104-3423; (818) 798-1715.

MAY

4—Mole Cricket Classic & Educational Seminar, Alabama Turfgrass Association, Oak Mountain State Park, Birmingham, AL. Contact: Judy P. Copeland, executive secretary, P.O. Box 70, Auburn, AL 36831-0070; (205) 887-6916.

7—Pest Control Workshop, Agricultural Center Auditorium, Sanford, FL. Contact: Uday Yadav, University of Florida, extension service, Sanford, FL 32771; (305) 323-2500 ext. 182.

13-16—American Horticultural Society Annual Meeting, Omni Park Central Hotel, New York City, NY. Contact: Harriet Sweeney, meeting planner, AHS, P.O. Box 0105, Mt. Vernon, VA 22121; (703)



110 KINDS OF PLANTS. 43 TYPES OF INSECTS. 1 SPRAY.

You're looking at a picture, not of a place, but of an idea: ORTHENE® Tree and Ornamental Spray, and why it means so much to professional gardeners, nurserymen, arborists and golf course superintendents.

ORTHENE offers blanket protection against an amazing variety of insect pests. It's cleared for use on a long list of trees and plants, from orchids to roses to ponderosa pine, even for turf. Cleared last year for use against turf insects, ORTHENE* has just been okayed for mole crickets in Florida—the main enemy of professionals' healthy greens and fairways.

By using ORTHENE, one spray lets you kill pests like tent caterpillars, whiteflies, Japanese beetles and thrips on contact. Plus it provides lasting residual action against other insects from aphids to scale crawlers to sod webworms. It's a great way to make the whole job of protecting flowers, trees and turf simpler, and more effective.

If you're a professional in the plant care industry, ORTHENE can actually make it easier to do a better job of protecting plants. You ought to know more about it. To find out, send in this coupon.

*ORTHENE 75 S Soluble Powder (Florida SLN).

Avoid accidents: For safety, read the entire label including precautionary statements. Use all chemicals only as directed. Copyright © 1985 Chevron Chemical Company. All rights reserved.

ORTHENE.

Chevron

ORTHO

Chevron Chemical Company

Mail to:
Lee Sutherland
Chevron Chemical Company
575 Market Street
San Francisco, CA 94105

Please send me more information on ORTHENE.

Name

Company

Street Address

City

State Zip

Circle No. 221 on Reader Inquiry Card

TURF CALENDAR

768-5700.

15-18—Western Chapter, International Society of Arboriculture Annual Conference, Santa Cruz Holiday Inn, Santa Cruz, CA. Contact: Donald F. Blair, 1958 Latham St., Mountain View, CA 94040; (415) 967-4676.

20—North Carolina Turf & Landscape Field Day, NCSU Turf Field Center, Raleigh, NC. Contact: J.M. DiPaola, Box 7620, North Carolina State University, Raleigh, NC 27695-7620; (919) 737-2657.

21-24—Florida Ornamental Growers Annual Seminar, Orlando, FL. Contact: Dr. Benny Tjia, 1509 Fifield Hall, Dept. of Ornamental Horticulture, University of Florida, Gainesville, FL 32611; (904) 392-7935.

JUNE

16-19—New England Cemetery Association Conference, Sea Crest Resort, North Falmouth, MA. Contact: Frederick R. Laffond, secretary/treasurer, 15 Riverton St., Keene, NH 03431; (603) 352-7655.

17-20—American Association of Botanical Gardens & Arboretums, Chicago Botanical Garden, Chicago, IL. Contact: Susan H. Lathrop, AABGA, P.O. Box 206, Swarthmore, PA 19081; (215) 328-9145.

18—Iowa Turfgrass Field Day, Iowa Turfgrass Institute & Iowa State University, Horticultural Research Farm, Ames, IA. Contact: Dr. Michael Agnew, 105 Horticulture Building, Iowa State University, Ames, IA 50011; (515) 294-0027.

18—Turf Seed Inc. Field Day, Research Station, Hubbard, OR. Contact: Tom Stanley, P.O. Box 250, Hubbard, OR; (503) 981-9571.

25—University of Massachusetts Turfgrass Field Day, Turfgrass Research Center, South Deerfield, MA. Contact: Dr. R.J. Cooper, Dept. of Plant & Soil Sciences, Stockbridge Hall, University of Massachusetts, Amherst, MA 01003; (413) 545-2353.

JULY

8—Connecticut Nurserymen's Summer Meeting & Trade Show, Holdridge Farm Nursery, Ledyard, CT. Contact: Larry Carville, Room 109, 30 Lafayette Square, Vernon, CT 06066; (203) 872-2095.

13-15—NFSA Mid-Year Dealer Conference, National Fertilizer Solutions Association, Adam's Mark Hotel, St. Louis, MO. Contact: Robin Roberts, 10777 Sunset Office Dr., St. Louis, MO 63127; (314) 821-0340.

15-17—Florida Foliage Expo, Florida Foliage Association, Diplomat Hotel, Hollywood, FL. Contact: Ann King, P.O. Box Y, 57 E. Third St., Apopka, FL 32704; (305) 886-1036, in Florida (800) 342-0138.

19-21—American Association of Nurserymen Convention & Nursery Industry Exposition, Amway Grand Plaza, Grand Rapids, MI. Contact: Lawrence E. Scovotto, 1250 I St. NW, Suite 500, Washington, DC 20005; (202) 789-2900.

19-23—American Society of Plant Physiologists Annual Meeting, St. Louis, MO. Contact: Dr. M.J. Josephs, 15501-A Monona Dr., Rockville, MD 20855; (301) 251-0560.

21-22—Association for the Use of Native Vegetation In Landscapes Annual Meeting, Chicago, IL. Contact: Dr. Ray Freeborg, Dept. of Agronomy, Purdue University, West Lafayette, IN 47907; (317) 494-4784.

22—Kansas Turfgrass Field Day, Kansas State University, Manhattan, KS. Contact: Larry D. Leuthold, Horticulture Dept., Waters Hall, Kansas State University, Manhattan, KS 66506; (913) 532-6173.

28-30—Penn Allied Nursery Trade Show, Pennsylvania Nurserymen's Association, Valley Forge Convention & Exhibit Center, King of Prussia, PA 17102; (717) 238-1673.

29-31—ASPA Summer Convention & Field Day, American Sod Producers Association, Westin Hotel, Seattle, WA. Contact: Douglas H. Fender, ASPA, 4415 W. Harrison, Suite 309-C, Hillside, IL 60162; (312) 449-2890.

AUGUST

1-3—SNA Horticultural Trade Show, Southern Nurserymen's Association, Georgia World Congress Center, Atlanta, GA. Contact: Thomas L. Henegar, 3813 Hillsboro Rd., Nashville, TN 37215; (615) 383-5674.

2-5—Soil Conservation Society of America Annual Meeting, Sheraton & Northern Hotels, Billings, MT. Contact: Walt Peechatka, 7515 N.E. Ankeny Rd., Ankeny, IA 50021; (515) 289-2331.

3-8—Perennial Plant Symposium, Perennial Plant Association, Omni Hotel, Baltimore, MD. Contact: Dr. Steven M. Still, 2001 Fyffe Court, Columbus, OH 43210; (614) 422-6027.

4—Nebraska Turfgrass Field Day & Equipment Show, University of Nebraska ARDC, Mead, NE. Contact: Dr. Terry Riordan, University of Nebraska, Dept. of Horticulture, 377 Plant Science, Lincoln, NE 68583; (402) 472-1142.

5—Illinois Landscape Contractors Association Summer Field Day, Bork Nurseries, Onarga, IL. Contact: Lucile M. Little, 2200 S. Main Street, Suite 301, Lombard, IL 60148; (312) 932-8443.

9-13—Botanical Society of America Annual Meeting, Ohio State University, Columbus, OH. Contact: Thomas N. Taylor, Dept. of Botany, Ohio State University, 1735 Neil Ave., Columbus, OH 43210; (614) 422-3564.

12—New England Nurserymen's Summer Meeting & Trade Show, Newport Growers, The Glen, Portsmouth, RI. Contact: Larry Carville, Room 109, 30 Lafayette Square, Vernon, CT 06066; (203) 872-2095.

14-17—TAN-MISSLARK Regional Nursery & Garden Supply Show, Texas Association of Nurserymen, Dallas Convention Center, Dallas, TX. Contact: Bill R. Fullingim, 512 E. Riverside Dr., Suite 207, Austin, TX 78704; (512) 444-7489.

16-19—Municipal Arborists & Urban Foresters Society, International Society of Arboriculture, Keystone Moutain Resort, CO. Contact: Cal Bundy, I.S.A., 5 Lincoln Square, P.O. Box 71, Urbana, IL 61801; (217) 328-2032.

25-27—Garden Industry of America Conference & Trade Show, Orange County Convention/Civic Center, Orlando, FL. Contact: B. Silverman/PEMCO, 2400 E. Devon Ave., Suite 205, Des Plaines, IL 60018; (312) 299-3131.

28-30—Northwest Nursery Industry Trade Show, Oregon Association of Nurserymen, Portland Memorial Coliseum, Portland, OR. Contact: Dan O. Barnhart, 2780 S.E. Harrison, Suite 204, Milwaukie, OR 97222; (503) 653-8733.

SEPTEMBER

2-4—Pacific Horticultural Trade Show, California Association of Nurserymen, Los Angeles Convention Center. Contact: Richard C. Staples, 1419 21st St., Sacramento, CA 95814; (916) 443-7373.

10-11—Alabama Turfgrass Conference, Alabama Turfgrass Association, Auburn Conference Center/Best Western, Auburn, AL. Contact: Judy P. Copeland, P.O. Box 70, Auburn, AL 36831-0070; (205) 887-6916.

11-13—Southwest Nursery & Landscape Show, Arizona Nursery Association; Ariz. Landscape Contractors Association; Ariz. Florists Association, Phoenix Civic Plaza Convention Center, Phoenix, AZ. Contact: Donald M. Johnson, 444 West Camelback Rd., Suite 302, Phoenix, AZ 85013; (602) 241-0317.

18-21—Annual Congress for Recreation & Parks, National Recreation & Park Association, New Orleans, LA. Contact: M. Susan McCarthy, NRPA, 3101 Park Center Dr., 12th Floor, Alexandria, VA 22302; (703) 820-4940.

21-24—Northwest Turfgrass Conference, Salishan Lodge, Gleneden Beach, OR. Contact: Roy L. Goss, Western Washington Research & Extension Center, Puyallup, WA 98371; (206) 593-8513.

25-27—Florida Nursery & Allied Trade Show, Florida Nurserymen & Growers Association, Orange County Civic Center, Orlando, FL. Contact: Susan Stoun, 5401 Kirkman Rd., Suite 650, Orlando, FL 32819; (305) 345-8137.

OCTOBER

6—Turfgrass Equipment, Irrigation, and Supplies Field Day, Golf Course Superintendents Association of New Jersey, Rutgers Stadium and Golf Course, NJ. Contact: Dr. Henry Indyk, Soils & Crops Dept., Cook College, New Brunswick, NJ 08903; (201) 932-9453.

7-8—Southern California Turfgrass/Landscape Equipment & Materials Education Exposition, Southern California Turfgrass Council, Orange County Fairgrounds, Costa Mesa, CA. Contact: Ed McNeill, 2492 E. Mountain St., Pasadena, CA 91104-3423; (818) 798-1715.

7-10—National Bark Producers Association's Annual Meeting, Kiawah Island Plantation, Charleston, SC. Contact: R.C. LaGrasse, 13542 Union Village Circle, Clifton, VA 22024; (703) 830-5367.

7-10—National Master Gardeners Conference, Cooperative Extension Service/Master Gardeners, Washington, DC. Contact: Pamela Marshall, CES/UDC, 1351 Nicholson St. NE, Washington, DC 20011; (202) 282-7410.

11-16—1988 Florida Turfgrass Conference & Show, Florida Turfgrass Association, Hyatt Regency Hotel, Tampa, FL. Contact: Ruth Shepherd, or William Nass, 302 S.

BROUWER
turf maintenance team

7-GANG/FAIRWAY HYD. LIFT MOWER
Circle No. 301

5-GANG HYD. LIFT MOWER IN TRANSPORT
Circle No. 302

SUPER-3 P.T.O. MODEL (ENGINE MODEL AVAILABLE) Circle No. 303

BROUWER TRIPLEX-376
Circle No. 304

5-GANG VERTI-CUT VERTICAL MOWER
Circle No. 305

THE LARGE CAPACITY BROUWER-VAC
Circle No. 306

THE BROUWER GREENSMOWER
Circle No. 307

BROUWER SOD CUTTER/RENOVATOR
Circle No. 308

MODELS 24 & 67 LAWNMAKER-SEEDER
Circle No. 309

aggressive...innovative

The Brouwer Turf Maintenance Team . . . the one to beat.

Check our product line and you are sure to find the machine to suit your requirements.

Golf courses, school boards, landscapers, municipalities, highway departments, parks and recreation departments will all find a machine that fits the bill – and the budget!

Brouwer . . . the name and the products that you can have confidence in. Confidence in the quality, the innovative engineering, the rugged reliability, the lasting value. Confidence in a company that gives "second-to-none" after sales service. Get the best results from your turf maintenance equipment – put the Brouwer turf maintenance team to work – today.

BROUWER
TURF EQUIPMENT LIMITED

7320 Haggerty Rd./Canton, MI. 48187 Telephone (313) 459-3700
Woodbine Avenue/Keswick, Ontario, Canada L4P 3E9 Telex 065-24161 Telephone: (416) 476-4311

85-51

TURF CALENDAR

Graham Ave., Orlando, FL 32803-6399; (305) 898-6721.

14-17—American Society of Consulting Arborists Annual Meeting, Red Lion Inn, Santa Barbara, CA. Contact: ASCA, 700 Canterbury Rd., Clearwater, FL 33546; (813) 446-3356.

25-28—1987 International Irrigation Exposition & Conference, Irrigation Association, Orange County Convention/Civic Center, Orlando, FL. Contact: Ann McClure, 1911 North Fort Myer Dr., Suite 1009, Arlington, VA 22209; (703) 524-1200.

28-31—International Trade Fair for Design, Equipping, and Care of Amenity Areas, Cologne, GERMANY. Contact: Willi Julich, Messe-und Ausstellungs-Ges.m.b.H. Koln, Postfach 210760, D-5000 Koln 21, GERMANY.

31-Nov. 3—American Society of Landscape Architects Annual Meeting & Educational Exhibit, Baltimore, MD. Contact: Pam Jensen, ASLA, 1733 Connecticut Ave., Washington, DC 20009; (202) 466-7730.

NOVEMBER

2-4—Kansas Turfgrass Conference, Kansas Turfgrass Foundation, Ramada Hotel, Wichita, KS. Contact: Larry D. Leuthold, Dept. of Horticulture, Kansas State University, Manhattan, KS 66506; (913) 532-6170.

4-6—NYSTA Turf & Grounds Exposition, New York State Turfgrass Association, Rochester Riverside Convention Center, Rochester, NY. Contact: Ann Reilly, 210 Cartwright Blvd., Massapequa Park, NY 11762; (516) 541-6902.

5-6—South Carolina Horticulture Society Convention, Sheraton NW, Clemson, SC. Contact: Dr. G. Ansel King Jr., Horticulture Dept., Clemson University, Clemson, SC 29634-0375; (803) 656-2789.

8-11—PGMS Annual Conference & Trade Show, Professional Grounds Management Society, Hyatt-Crystal City, Crystal City, VA. Contact: Allan Shulder, PGMS, 3701 Old Court Rd., Suite 15, Pikesville, MD 21208; (301) 653-2742.

8-12—National Institute on Parks and Grounds Management, Tulsa, OK. Contact: Barbara Bednaroski, Box 1936, Appleton, WI 54913; (414) 733-2301.

13-16—PLCAA Convention & Trade Show, Professional Lawn Care Association of America, San Antonio, TX. Contact: Douglas K. Moody, PLCAA, 1225 Johnson Ferry Rd. N.E., Suite B-220, Marietta, GA 30067; (404) 977-5222.

17-19—The Professional Landscape Contracting, Turf & Grounds Maintenance Expo (Pro Show '87), Dallas Convention Center, Dallas, TX. Contact: Pro Show, 101 N. 7th St., Louisville, KY 40202; (502) 582-1672.

28—N.Y. Association of Landscape Contractors Annual Dinner Dance, Leonards of Great Neck, Long Island, NY. Contact: Tom McFadden or Frank Alberto, 1190 Lakeland Ave., Bohemia, NY 11716; (516) 589-3434.

29-Dec. 4—Annual Meetings of the American Society of Agronomy, Crop Science Society of America, & Soil Science Soiety of America, Atlanta, GA. Contact: ASA Headquarters Office, Convention Coordinator, 667 S. Segoe Rd., Madison, WI 53711; (608) 273-8080.

Late Nov.—North Carolina Irrigation Conference, North Carolina Irrigation Society, Inc.; N.C. Agricultural Extension Service, McKimmon Center, NCSU, Raleigh, NC. Contact: Ronald E. Sneed, Box 7625, North Carolina State University, Raleigh, NC 27695-7625; (919) 737-2675.

DECEMBER

7-9—USTC & TBA Technical Meeting & Trade Show, United States Tennis Court & Track Builders Association, The Fairmont Hotel, New Orleans, LA. Contact: Sharon Black, 223 W. Main St., Charlottesville, VA 22901; (804) 971-2860.

7-10—New Jersey Turfgrass Expo '87, Resorts Hotel, Atlantic City, NJ Contact: Dr. Henry Indyk, Soils & Crops Dept., Cook College, New Brunswick, NJ 08903; (201) 932-9453.

8-10—North Central Turfgrass Exposition, Illinois Turfgrass Foundation, Chicago, IL. Contact: Alfred Van Horn III, 435 N. Michigan Ave., Suite 1717, Chicago, IL 60611; (312) 644-0828.

8-10—North Central Weed Control Conference Annual Meeting, Kansas City, MO. Contact: Robert Schmidt, 309 W. Clark, Champaign, IL 61820; (217) 356-3182.

11-12—Southern Nevada Desert Turfgrass Conference, Nevada Cooperative Extension, Las Vegas, NV. Contact: Bob Morris, 953 E. Sahara, STP fi207, Las Vegas, NV 89104; (702) 731-3130.

11-14—NFSA Convention & Exposition, National Fertilizer Solutions Association, Kansas City, MO. Contact: Robin Roberts, 10777 Sunset Office Dr., St. Louis, MO 63127; (314) 821-0340.

14-16—Texas Turfgrass Association Conference & Show, Hyatt Regency, Houston, TX. Contact: Shirley Duble, 3606 Meadow Oaks, Bryan, TX 77802; (409) 268-0630.

Next month . . .

GCSAA SHOW ISSUE

Let them talk to the animals. Sea World.

When your clients visit Sea World, they'll whisper to a walrus. Sing to a sea lion. Coo to a cockatoo. Pet a smiling dolphin or hug the biggest friend they'll ever make – Shamu,™ the world-famous killer whale. You'll be putting some real life into their Orlando vacation . . . on stage and off.

So sell them Sea World. They'll thank you for it. Commissions paid to travel agents for theme park admission as well as nightly luau dinner and show.

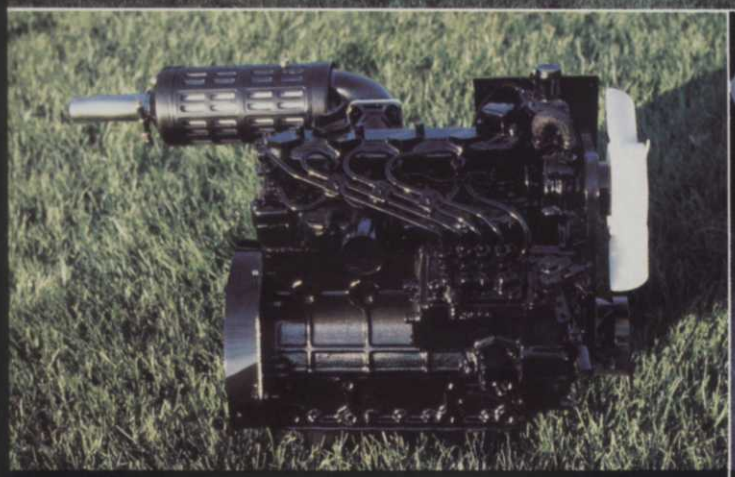
Book your groups or order individual tickets by mail. For more information, office supplies of brochures or window displays, please contact:

Sea World
Group Sales
7007 Sea World Drive
Orlando, Florida 32821

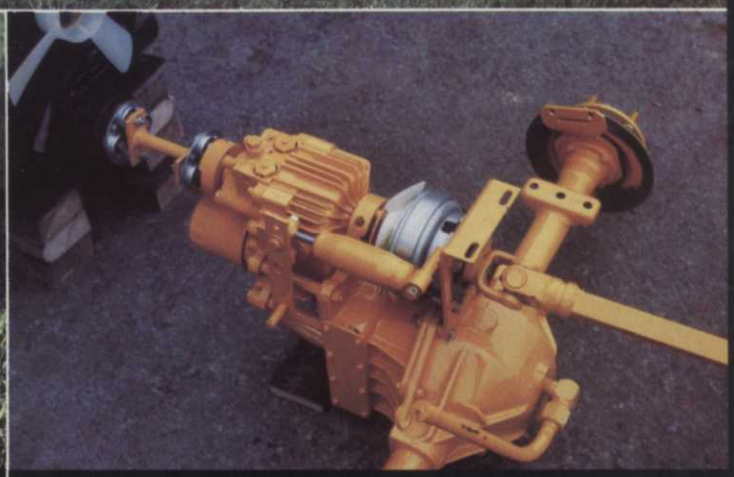
Or call toll free:
Nationwide 1-800-327-2420,
or in Florida, 1-800-432-1178.

NEW TURF BLAZER II

INTRODUCING NEW GENERATION OF DIRECT DRIVE ROTARIES



CHOICE OF THREE WATER-COOLED ENGINES



SIMPLE, EFFICIENT DIRECT DRIVE

The TURF BLAZER II, designed to be a highly productive, mowing machine in a variety of mowing conditions, yet gentle enough to groom the finest lawn.

SELECT the KUBOTA engine to fit your needs.

Choose the 4-cylinder 22HP diesel, the 3-cylinder, 16.5 HP diesel or the 3-cylinder, 21 HP gas. ALL engines are water-cooled.

A new direct drive system to the cutting deck eliminates PTO belts. This direct drive system assures maximum power transfer to the deck. NO belts means NO belt wear and no slippage.

Choose a 48″, 60″, 72″ or 82″ deck. These side-discharge rotaries allow close trimming and uniform discharge of clippings.

DON'T WAIT! Contact your Local HOWARD PRICE distributor for a demo on your turf.

Circle No. 220 on Reader Inquiry Card

Manufactured by HOWARD PRICE TURF EQUIPMENT

18155 Edison Avenue
Chesterfield, Mo. 63017

The most effective crabgrass

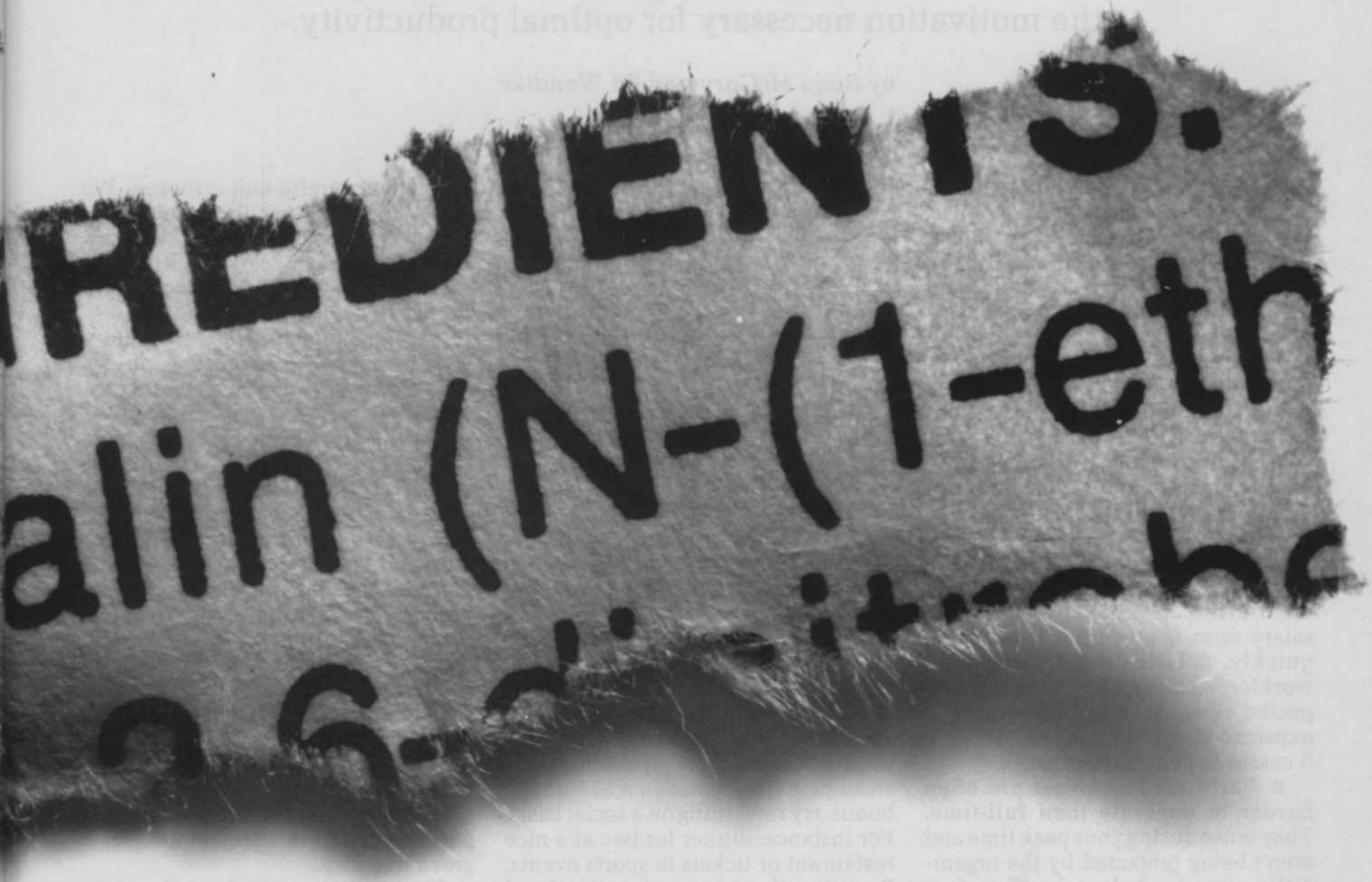
Take our

Labels of your best pre-emergent crabgrass and goosegrass herbicides have one thing in common. And it can be summed up in a word: *pendimethalin*.

That's because pendimethalin from American Cyanamid is the only active ingredient that offers season-long crabgrass and goosegrass control in both warm and cool season turf grasses. And it does it very economically.

But pendimethalin controls more than just crabgrass and goosegrass. One low rate also prevents other tough grassy weeds including foxtail, fall panicum, barnyardgrass and *Poa*

and goosegrass control.



word for it.

annua. Hard-to-control broadleaf species like oxalis and spurge are also eliminated with the same rate.

What's more, pendimethalin breaks down into the environment. And it doesn't move laterally through the soil. Which means it won't seep into bodies of water or stop vegetation you don't want it to stop. Plus, pendimethalin-based herbicides don't have an offensive odor like some products.

So remember, when you select a herbicide with pendimethalin on the label, you have crabgrass and goosegrass control in the bag. And our word. Always read and follow label directions carefully.

CYANAMID
Agricultural Division
Wayne, NJ 07470

©1986

Circle No. 101 on Reader Inquiry Card

SECOND OF THREE PARTS

MOTIVATION TIPS

Getting the most out of employees is one key to a successful operation. A salary by itself will not provide the motivation necessary for optimal productivity.

by Rudd McGary and Ed Wandtke

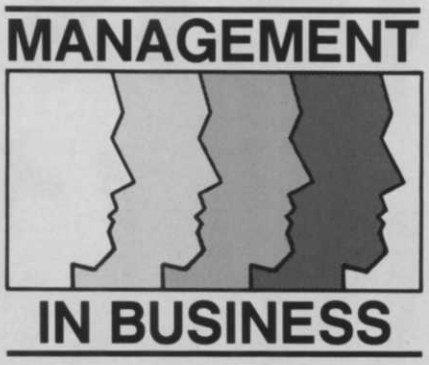
Most major motivational theories used to explain organizational life are applicable to green industry organizations. But this month we want to be more specific about issues you face in managing your staff.

Several basic concepts relate to the green industry. Let's examine each:

1. Salaries don't motivate. Giving someone a salary for performing a task isn't a motivational tool. We have heard managers in the green industry say that performance was going to be rewarded by "letting the guy keep his job." That's sort of an Attila the Hun approach to management. There is often a rise in productivity when a salary raise is given but it levels off quickly. Salaries don't motivate a workforce because they become expected rewards. Once something is expected and given on a regular basis, it ceases to be motivational.

2. Part-time employees are often harder to motivate than full-time. They enter during your peak time and aren't being protected by the organization over a whole year. Therefore they don't have the same motivation that your full-time people do, and you shouldn't expect it from them. In addition they are at the low end of the pay scale and probably don't have incentives built into their compensation. For these reasons, you shouldn't

Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. Dr. McGary focuses on marketing and management issues. Wandtke focuses on operations and financial questions.



expect the part-timers to have the same high-level motivation as full-time employees. They may have, but don't expect it.

3. Non-cash incentives may be more motivational than money. Most workers in the green industry aren't afforded executive perks but may respond to small amounts of money used as motivational incentives. Instead of giving someone a $25 or $50 bonus, try rewarding on a social basis. For instance: dinner for two at a nice restaurant or tickets to sports events. By getting these types of motivational rewards the employees get something that shows them that you are interested in them as people. This reward may also provide the individuals with some time off, an equally wanted reward in the heat of summer.

4. Rewards given for extraordinary performance are highly motivational. If someone simply does his/her job, it's hard to compensate in any exceptional manner. However, if they do the job well above expectations they should be rewarded.

5. Rewards are motivational only if they come close to the action being rewarded. If someone does well and you wait six months to reward them, they'll find the reward scarcely motivational. The event itself and the reward must be linked in the person's mind or they won't be motivated.

6. Everyone needs verbal pats on the head. (Also known as the famous "attaboys" or "attagirls.") Most managers who enjoy good relationships with their employees are very good at giving both praise and criticism. We all need both. Since the employee is probably not as motivated as the manager, the manager's responsibility is to let the employee know how they are doing. It is surprising how motivational the simple phrase, "you did a good job today," is to most people.

7. Some rewards for performance should be stated, some can be given unexpectedly. If you have a specific task or project that has to be finished in a given time frame, you can offer rewards based on performance. State the rewards you're offering before work on the project begins. These bonuses are often very motivational. Bonuses or rewards given on an unexpected basis can be even more motivational. An unexpected bonus, particularly non-cash, will often be remembered long after the expected performance bonus is forgotten.

Manager/worker communication

Considering these factors, we can see patterns that are applicable to the green industry.

First, part-time people can be motivated but are less likely to be highly motivated all the time. This means that your spring or summer crews need to have more management communication, a responsibility that lies with management.

Second, don't use money as a motivator exclusively. You probably can't afford to give bonuses all the time but you can give non-cash incentives and rewards. They can be even more motivational than money.

Third, do the unexpected. It's extremely motivational. Timing is important and employees rewarded unexpectedly do remember.

Finally, don't expect the same level of motivation from your people that you have. You're the manager, you see more of the overall situation, and you have more control over it. In order for you to be successful, your people have to be motivated.

There are many opportunities in the green industry to use some of the concepts above. Good managers do. **WT&T**

New low price!

The most effective pre-emergent weed control is also the most economical.

LESCO PRE-M 60DG Herbicide

Active ingredient: Pendimethalin

Pendimethalin herbicides dominated the pre-emergent market in 1986. And the top seller — with a sales volume well above the competition's — was LESCO PRE-M.

That's good news for you. Our volume allows us to offer the number one pre-emergent product on the market today at a dramatically low cost per acre. And low cost isn't the only benefit.

LESCO PRE-M prevents winter annuals such as *Poa annua*, chickweed and henbit and controls tough broadleafs like oxalis and spurge, as well as grassy weeds like crabgrass, goosegrass, barnyardgrass, foxtail and more. It's labeled for use on all northern and southern turfgrasses except bentgrass and dichondra.

Don't pay a premium for pre-emergent weed control. Cut your costs with LESCO PRE-M 60DG Herbicide and get the control you've been looking for — order what you need for spring today!

(800) 321-5325
NATIONWIDE

(800) 362-7413
IN OHIO

LESCO

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116 (216) 333-9250

Circle No. 215 on Reader Inquiry Card

PRE-M™

Fall I
with A

I Love Gravely

Ninety-six percent of the professionals, commercial users and homeowners we talked to told us they love the way their Gravelys perform. Go to a Gravely dealer to test a riding tractor, two-wheel tractor or our Pro Series today. And fall in love with a Gravely. GRAVELY®

Gravely International, Inc., One Gravely Lane, P.O. Box 5000, Clemmons, NC 27012 • 919-766-4721 • TELEX: 6971451 ARGRA
GSA# 07F13713 • HUD# HC-17095

Circle No. 111 on Reader Inquiry Card

THE EUCALYPTUS LONGHORNED BORER

A new insect pest is threatening California's eucalyptus trees. So far, there aren't many solutions to the growing problem.

by Dr. A.D. Ali, Janet S. Hartin, and Dr. T.D. Paine

The eucalyptus longhorned borer (ELHB), *Phoracantha semipunctata* (F.), is an exotic beetle now attacking eucalyptus trees in southern California.

Adults are 1-1½ inches long, dark brown with two yellow zig-zag lines and two yellow oval dots on the wings. The beetle belongs in the family Cerambycidae whose members generally possess a pair of antennae as long or longer than the body, hence the name "longhorned."

This pest was first detected in October, 1984, in El Toro (Orange County). Since then, infestations have spread to six southern California counties ranging from Camp Pendleton, San Diego County; north to Simi Valley, Ventura County; inland to Redlands, San Bernardino County; and Hemet in Riverside County.

The eucalyptus longhorned borer as an adult beetle (A) and as a larva (B). The larvae cause the heaviest damage to Eucalyptus trees.

Life cycle and damage

Adult ELHB fly only at night and hide under loose eucalyptus bark in the day. Mated females lay eggs under loose bark in masses ranging from 10-100 eggs.

The larvae hatch in 10-14 days and feed superficially on the bark, leaving dark trails up to 1 inch in length.

As they increase in size, the larvae start boring inside the bark and feed in the cambium layer. The larval stages known as roundheaded borers cause most of the damage.

Larvae tunnel through the phloem and cambial tissues as they feed, producing galleries that usually run parallel to each other and are tightly packed with frass (fecal pellets which the larva produces as it feeds). These tunnels widen as the larva grows and may reach three times the width of the larva's head region.

This feeding disrupts the movement of water and nutrients through the plant, which leads to the death of infested limbs and branches. Under severe infestations the main trunk can be girdled, resulting in tree death.

As the larva matures it starts boring into the wood up to a distance of 4-6 inches where it constructs a pupation chamber. The pupa, the intermediate stage between the larva and the adult, remains protected deep inside the tree until maturity.

At that time it transforms into an adult and emerges through characteristic oval-shaped exit holes on the trunk, completing the life cycle.

Under warm conditions, the cycle from egg to adult can be completed in two months. In cooler climates, this cycle may last as long as nine months. Consequently, in California this pest may have two or three overlapping generations per year.

To date, ELHB has only been found in eucalyptus species in California. Reports from other countries indicate that other trees in the Myrtaceae can be attacked as well. These include the gum myrtle (*Angophora* spp.) and the turpentine tree (*Syncarpia* spp.)

The feeding galleries of the eucalyptus longhorned borer. Note the parallel galleries.

Cultural control

Although adult females lay their eggs on healthy, weakened, and dead eucalyptus trees, the larvae can only establish their infestation on weakened or dead trees.

Deep watering and proper fertiliza

Dr. A. D. Ali is extension entomologist, Ornamentals and Turfgrass, Cooperative Extension, UC-Riverside; Janet S. Hartin is environmental and urban horticulturist, UC-Cooperative Extension, San Bernardino County; and Dr. T. D. Paine is assistant professor, Department of Entomology, UC-Riverside.

The eucalyptus tree in the center shows symptoms of damage due to the longhorned borer.

tion which keep trees in good vigor are recommended to discourage ELHB attacks. Healthy trees produce copious amounts of dark sticky gum which drowns and kills penetrating larvae.

Dead trees and those weakened by physiological or moisture stress lack the ability to defend themselves. Branches and whole trees which have succumbed to ELHB attacks are brown in color and retain the dried up leaves.

When this situation is encountered, the affected branches and dead trees must be removed and disposed of through incineration or burial to a depth of 6-8 inches. This will prevent adults from emerging and spreading the infestation.

Adults can fly over distances up to nine miles. However, the physical transportation of infested eucalyptus logs may be the biggest cause contributing to fast spreading infestations in southern California.

Thus it is necessary that eucalyptus logs used for firewood be thoroughly inspected for infestation before transport. Furthermore, firewood logs should be arranged in uniform piles and covered with a thick plastic tarp.

The tarp prevents adult beetles from detecting the wood pile and depositing eggs on it. And, if the pile already contains an infestation, it prevents those adults from emerging and spreading.

Chemical control

Adults and eggs of the ELHB are sheltered under loose bark, whereas larvae and pupae are protected inside the trunk. Consequently, the use of foliar applications of insecticides is not recommended due to the difficulty of getting the material in contact with any stage of the pest's development.

Two other considerations also limit the effectiveness of foliar applications against this insect.

The first is the height of trees, especially those planted in windbreaks that may be more than 100-years-old. Coverage becomes a problem with such trees that are 100 feet or taller.

The other problem with using foliar applications of insecticides is the lack of distinct generations or "peak flight" of this insect which would better allow timing of applications.

It is believed that two or three overlapping ELHB generations occur in California and adult females may live up to six months. This has led researchers at the University of California in Riverside to initiate studies for controlling this pest with systemic soil-injected insecticides.

The objectives are to determine efficacy and to document the economic feasibility of such control practices in both windbreak and woodlot eucalyptus plantings.

Biological control

Due to the wide-area planting of eucalyptus alongside highways, in parks, woodlots, and backyards, it seems that long-term control could be achieved through the use of biological agents.

However, not many native predators or parasites feed on this introduced pest.

While a predaceous mite has been observed feeding on ELHB eggs in California, the quantitative impact of such mortality has not yet been assessed.

In its native Australia, ELHB is attacked by numerous biological agents including both predators and parasites. Researchers at the University of California in Riverside are studying the feasibility of introducing parasites from Australia into California to combat this pest problem.

No long-term solutions

The use of cultural practices (keeping trees in good growing condition, cutting and destroying infested limbs and trees, tarping eucalyptus firewood piles) is recommended.

Use of systemic insecticides may provide a short-term solution to slow down the spread of ELHB infestations. And the successful introduction and establishment of effective parasites could provide a long-term solution for containment of the eucalyptus longhorned borer. **WT&T**

County Stadium gets a new water supply

by Bernie Rupp, Milwaukee Brewers

Last fall, a new irrigation and drainage system was installed at Milwaukee County Stadium under the direction of Harry Gill, superintendent of buildings and grounds, and his assistant Gary Vanden Berg.

They decided that the Toro 640 irrigation system would be best for use. Fifty-seven rotary, gear-driven, pop-up heads were installed. They are constructed of cycoloc plastic with spring-loaded retractors, delirn gears and locking caps with check valves.

All irrigation heads were installed on swing joints. The heads were positioned 1 to 1½ inches below the finished grade. Sprinkler head connections were made to the existing 3-inch PVC main. Each irrigation head is controlled by a remote electric valve placed in a control box next to the irrigation head.

The field controllers are electromechanical units, capable of operating 12 normally closed 24-volt A.C. valves. Each controller has a 0- to 30-minute station timing, a 24-hour clock and a calendar clock allowing fully automatic independent programming.

Each of the field controllers is wired to the central controller which has one module capable of individual standard cycle functions such as "syringe" or "cancel" for each satellite or field control.

The central controller has a 24-hour clock, a 14-day program dial and a manual start button. The central control is the Toro VT-XP 4000 varitime unit, and the field controllers are Toro solid state VT-3 models.

Harry Gill (right) supervises installation of the irrigation pipe and wires through slit sod. "The only places we had to remove the sod was when we came to a sprinkler head," Gill notes.

Workers from Milwaukee Lawn install the Toro sprinkler heads.

The pipe used for the irrigation system is polyvinyl chloride pressure pipe rated at 200 psi. The piping and wiring were installed using a vibratory type apparatus. Pipe was placed 18 inches below grade.

In conjunction with the installation of our new irrigation system, a field drainage system was also installed. It is based on the concept developed by Cambridge Soil Services of Cambridge, England. It was installed by David Heiss of Turf Services in Spring Lake, Mich.

The system is implemented in three phases. Phase one consists of a slit measuring ¾-inch wide and 9 inches deep, placed 20 inches on centers radially from home plate. The slits were back-filled with sand, analyzed in the accompanying chart.

About 80 percent of the sand was in the 18- to 25-millimeter range, which is very good for sand-slitting work. It's uniformity and round particle size is especially good for this type of drainage system.

Phase two, which consists of an ID perforated pipe at the trench bottom, and phase three, a 4-inch perimeter drain adjacent to the warning track, were not installed at this time. The existing drain tile was adequate for the new drainage system.

All work was completed in eight working days. **WT&T**

SAND ANALYSIS

Mesh	(%) Retained
30	.2
40	5.8
50	27.0
70	47.0
100	19.8
140	.2

ED. NOTE: Milwaukee County Stadium received national media attention when heavy rain caused four feet of water to accumulate on the floor of the stadium this summer. Gill and his ground crew had the stadium ready to play ball the next day. "The irrigation system has been super," says Gill today. "It's probably one of the best things we've ever done here."

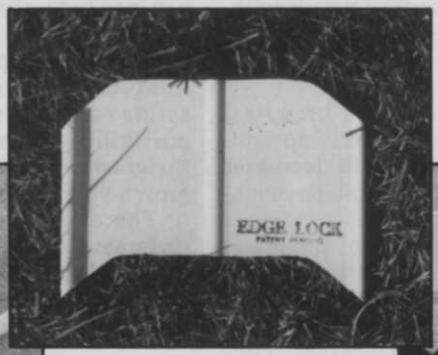
AUTHOR BIO: Bernie Rupp is employed by the Milwaukee Brewers.

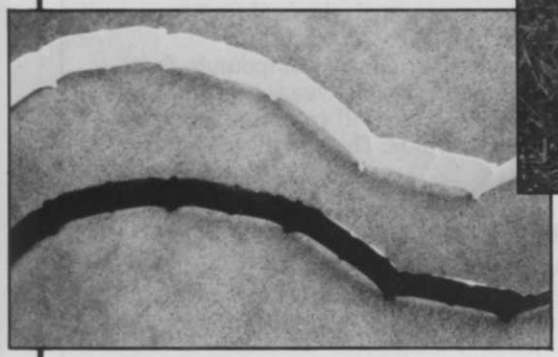
WE ARE ABOUT TO TURN THE PLASTIC LAWN EDGING INDUSTRY UPSIDEDOWN!

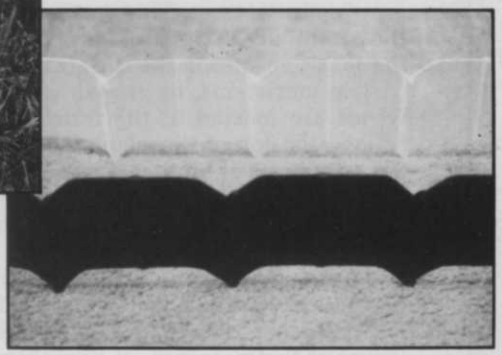
INTRODUCING NEW "EDGE LOCK™" THE SUPERIOR INTERLOCKING PLASTIC LAWN EDGING SYSTEM! (Patent Pending)

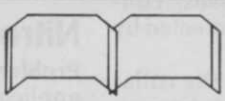
*No trenches to dig
*No connectors needed
*New PVC construction

*No stakes needed
*No cutting to fit
*One person installation

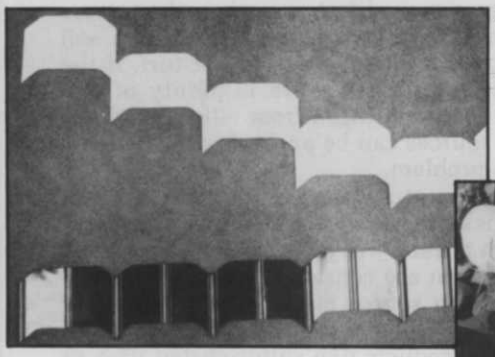








BEFORE SHOWING INTERLOCKING METHOD



AFTER INSTALLATION

EDGE LOCK superior lawn edging

The new "Edge Lock™" interlocking lawn edging system, is unlike any lawn edging you've ever used before. We've eliminated the problems associated with installing those "other" edgings. For example, no more long strips to fumble with. Each "Edge Lock™" section is only 6½" wide x 4¾" tall, and, each one locks inside the other, giving you the freedom to create any length you desire. And once it's locked in, it won't pull apart. Not to mention that any number of feet, or any configuration, can be easily installed by one person! There are no clumsy stakes to struggle with, and no time consuming trenches to dig, Edge Lock™ is self trenching and self supporting too! And since landscaping isn't just "straight lines", Edge Lock™ edging goes around corners without a fight. You can form a complete 18" circle without bending or forcing because each Edge Lock™ section swivels inside the other so it won't hamper your creativity. A 20' section of interlocking pieces comes in a small box 10½" x 7" x 5¼" that weighs 6 lbs., making it possible to transport thousands of feet in a small pickup truck! Edge Lock™ doesn't look like those "other" edgings either, it has a distinctive new beveled apperance, in fact it's so attractive when installed, you'll want to incorporate it as an integral part of your overall design! Want more? How about competitive pricing, colors like black, ivory and green, tallers pieces for softer soil, & high impact plastic construction. But then we could go on and on about the benefits of our new edging. If you would like to know more about Edge Lock™ the revolutionary new interlocking lawn edging system, call or write us for more information, and look for more innovations from the company that has been engineering quality products for over 35 years. (Patent pending).

EBERHART STEEL PRODUCTS CORPORATION / PLASTICS DIVISION

417 E. Jefferson Boulevard, Mishawaka, IN 46545-6594, (219) 259-2461, Ask for the Plastics Division

Circle No. 113 on Reader Inquiry Card

PROBLEM SOLVERS

by **Balakrishna Rao**, Ph.D

Why herbicides don't kill grass

Problem: *Why don't broadleaf herbicides kill turfgrass? (Georgia)*

Solution: Auxin herbicides (2,4-D, MCPP, dicamba) are able to selectively control broadleaf weeds without killing turfgrass because of basic morphological and physiological differences between the two types of plants.

The horizontally-oriented leaves of broadleaf weeds collect more herbicide than leaves of upright-growing turfgrasses. This vertical growth decreases the potential of toxic amounts of the herbicide reaching sensitive sites in the turfgrass plant.

The meristems, or growth points, of broadleaf weeds are located in the terminal portion of the stems—the top of the plant. This location exposes the meristems of broadleaf weeds to foliar sprays of herbicides. The meristems of turfgrasses, conversely, are close to the soil surface and protected by the leaf sheath.

Turfgrasses have meristems located at the collar and base of each leaf, while broadleaf weeds have no leaf meristems. Herbicides being translocated in the leaves of turfgrasses must pass through these meristematic areas where rapid metabolism detoxifies the herbicide before it reaches more sensitive areas of the plant. Broadleaf weeds, however, do not have the ability to detoxify herbicides before being translocated out of the leaf tissue since the leaves lack metabolic sites.

Turfgrasses can be severely injured by broadleaf herbicides under certain conditions. The immature leaves of seedlings cannot metabolize the herbicide before it is translocated to more delicate plant tissues. Heat- and drought-stressed turf is also more likely to be injured by herbicides because of reduced metabolic activity. Proper application of broadleaf herbicides to thriving, mature turf will selectively control broadleaf weeds without injuring the turfgrass.

Controlling undesirable plants

Problem: *Can you tell me some uses of allelopathic plants for control of undesirable plants? (New York)*

Solution: This is a very good question and concept in vegetation management. There is not much information on uses of allelopathic plants for control of undesirable plants. Most of the information is on the effect of allelopathic plants on desirable plants or crops. There is quite a bit of information on the allelopathic effect of the walnut plant on other plants. Ten- to 12-year-old walnut plants can produce juglone, an inhibitory chemical. I am not familiar with any studies showing juglone's effect on undesirable plants.

These allelopathic compounds released from plants are short-lived in the soil because they are subject to chemical or microbial decomposition. To be very effective, economical and practical to use, these compounds should be safe on desirable crops and sensitive and specific to undesirable plant species like weeds.

Reports from Michigan State University suggest that crops, like cucumbers, sorghum and sunflowers, can produce allelopathic chemicals which inhibit weeds. Reports from Rhode Island indicate that leachates from perennial ryegrass, red fescue and Kentucky bluegrass can affect the growth of forsythia and dogwood plants. This study suggests the possibility of allelopathic compounds released from turfgrass affecting ornamental plants if turfgrass is grown very close to them.

The effect of these inhibitory compounds from turfgrass culture on undesirable weeds is unknown. It may already be working well in nature in some situations and poor in others. This area needs further research.

Nitrogen amounts on sandy soils

Problem: *Is 1.2 lbs. of nitrogen per 1,000 sq. ft. per application excessive on bluegrass turf in west Michigan for a spring treatment on sandy soils? (Michigan)*

Solution: The answer to your question is yes and no. It depends upon several factors such as the release characteristics of nitrogen source, temperature, soil moisture, growth cycle and activity of turf. If the temperature is cool and there is plenty of soil moisture, 1.2 lbs. of nitrogen from either quick- or slow-release sources can be applied without anticipating much problem.

As the temperature increases with less soil moisture, quick-release nitrogen sources, like urea or ammonium nitrate, will present a problem at that high a rate. If you are considering using low-burn potential nitrogen source materials, Formolene or FLUF may not present problems at that rate. Controlled-release products like sulfur-coated urea or ureaform materials would be the safest of all.

These fertilization practices should coincide with the growth cycle of turfgrass. Provide the proper amount of fertilization based on soil test results and the shoot growth activity in spring.

Other factors to consider are sandy soils and surface-rooted bentgrass. Sandy soils will leach the nitrogen faster and deeper than finer textured soils. Surface-rooted bentgrass may not be able to use all the nitrogen applied before it leaches below the root zone. Therefore, consider applying at lower rates and at shorter intervals to overcome these problems.

Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

GET THE FEELING THEY KNOW SOMETHING YOU DON'T?

They do. It's their job to know things first and then pass that information on to you fast. Things like new turf management techniques, effective methods of insect and weed control, what really works... and what won't.

LOOK FAMILIAR?

They should. You've seen them often at turf shows, seminars, conventions—wherever industry news is in the making. They're the editorial and sales management team of WEEDS TREES & TURF. Please meet (sitting from left to right) Heide Aungst, Jerry Roche, Ken Kuhajda, (standing from left to right) Dick Gore, Bob Mierow, Ron Kempner, Jon Miducki and Bob Earley.

THERE'S NO GRASS GROWING UNDER THEIR FEET.

They apologize for not always being in when you call, but great stories are found in the field, not in the office. These pros know that the only way to really cover the green industry is to get out and be a part of it. From turf test plots in Oregon to the corridors of our nation's capital, they're following the leads, surveying the markets, and interviewing the landscape professionals who make our industry grow. Then, they use their years of experience to pull it all together, analyze and present it to you in a crisp, easy-to-read and easy-to-use style. That way, you have the information you need to do your job better, faster and more effectively.

The next time you want to know something about the green industry, give them a call. If you can't reach them at the office, don't worry. **They'll reach you** in the pages of WEEDS TREES & TURF.

WEEDS TREES & TURF

HBJ A HARCOURT BRACE JOVANOVICH PUBLICATION ABP BPA

7500 Old Oak Boulevard, Cleveland, OH 44130
(216) 243-8100

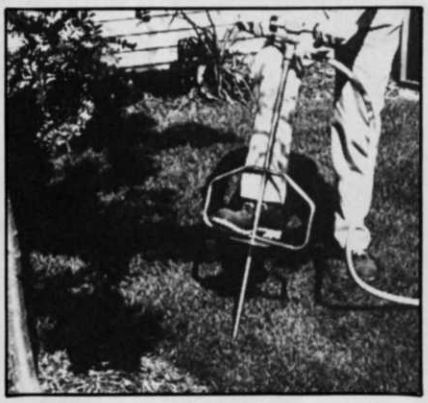
A GREAT MEDIUM TO GROW PROFITS IN.

PRODUCTS

Tree, ornamental feeder designed for deep injection

The new Lesco Tree and Ornamental Feeder is made for deep root injection of Lesco Arbor-Green, water-soluble fertilizers, insecticides and iron products.

The feeder operates with high-volume equipment at 150 to 200 psi. The feeder eliminates the need to drill holes or pound stakes for application. It fits on a 1/2-inch hose and injects into the plant material root zone. The hole at the end of the replaceable tip allows for rapid penetration of turf.



The lightweight feeder comes with a permanent splash plate, and can be operated with either foot. The feeder is compatible with the Lesco Digital Flow Meter for accurate application.

Circle No. 190 on Reader Inquiry Card

Signal herbicide dye reduces overspray chance

Signal herbicide dye, a highly-concentrated blue dye designed to color certain herbicides to help guarantee spot spraying accuracy, can be used for such applications as row crop riding equipment, hand-held sprayers, wand sprayers, tank sprayers, and back-pack units.

It is ideal for use at parks, cemeteries, golf courses, roadsides, around buildings and for general landscaping.

Signal will not harm vegetation, soil, equipment or human skin. It will eliminate waste and save time, chemicals and money.

The dye will also indicate blocked or clogged nozzles and make it easier to see if spray is drifting to unwanted areas.

Circle No. 191 on Reader Inquiry Card

ATTENTION LANDSCAPE CONTRACTORS

WEEDS TREES & TURF will be running its list of the "Top 50" landscape contracting companies in its February issue. Companies with more than $2 million in sales should contact us immediately at 1-800-4569.

TURF VAC® sweeps both turf and pavement

The only sweepers with unique all-vacuum design that operate on both turf or pavement, wet or dry. Safe, powerful air picks up bottles, cans, as well as fine clippings to reduce thatch build-up.

- Sweeping widths from 4′ to 30′.
- 6″ × 10′ hand intake hose available.
- Hard surface filtration.
- No fingers or brushes to wear out—picks up by air only.
- Ground dump & power lift dump.
- Tow type or self-propelled.
- PTO models available.

Write for brochures/distributor in your area.

TURF VAC CORPORATION
P.O. Box 90129, Long Beach, CA 90809
Telephone: (213) 426-9376

MODEL FM-3. With 4 ft. sweeping width and 11 HP B&S engine. Ideal for landscaping maintenance and other general purpose sweeping.

MODEL 80
Sweeps 48″ wide

MODEL 70 LD
Sweeps 54″ wide

MODEL FM-5
Lifts to Dump 96″

Circle No. 126 on Reader Inquiry Card

CLASSIFIEDS

RATES: $1.00 per word (minimum charge, $25). Bold face words or words in all capital letters charged at $1.25 per word. Boxed or display ads: $85 per column inch-1x (one inch minimum); $80-3x; $75-6x; $70-12x. Agency commissions will be given only when camera-ready art is provided by agency. For ads using blind box number, add $5 to total cost of ad. Send ad copy with payment to Dawn Nilsen, WEEDS TREES & TURF, 1 East First Street, Duluth, MN 55802 or call 218-723-9200.

BOX NUMBER REPLIES: Mail box number replies to: WEEDS TREES & TURF, Classified Ad Department, 1 East First St., Duluth, MN 55802. Please include box number in address.

BUSINESS OPPORTUNITIES

Lawn Care Business for sale. Western, North Carolina. 3 spray trucks. 330 contract customers. $144,000 gross in 1986. $53,000. 704-891-5125. 12/86

WANT TO BUY OR SELL a golf course? Exclusively golf course transactions and appraisals. Ask for our catalog. McKay Golf and Country Club Properties, 15485 N. East Street, Lansing, Michigan 48906. Phone (517) 484-7726. TF

Chemical Lawn Care Company, Long Island, New York. Established 18 years. 325 customers in a fast growing market. Excellent reputation with good accounts and well maintained equipment. Write to WTT Box 412. 12/86

HELP WANTED

WANTED: Experienced highly motivated person to manage lawn mower sales and repair shop. Must be experienced in budgets, promotions and employee supervision. Sales in Toro, Yazzo, Green Machine and Wheel horse power equipment. Send resume and salary requirements to Stephen Hillenmeyer, c/o Hillenmeyer Nursery, 2370 Sandersville Road, Lexington, KY 40511. 12/86

Aggressive landscape development firm with offices in Texas and Arizona expanding to California. Immediate openings for persons with experience in sales, supervision or management of commercial landscape and irrigation installation, grounds maintenance or tree services. Prefer applicant have experience and/or client contacts in either the Arizona or California markets. Tremendous growth potential for the right individuals. Send resume with experience and salary history to: WTT Box 406. All resumes held in confidence. 12/86

GENERAL MANAGER: Aggressive landscape development firm with offices in Texas and Arizona expanding to California. Seeking **General Manager** with experience in marketing/sales and management of commercial landscape company. Prefer applicant have experience and/or client contacts in either the Arizona or California markets. Successful candidate may have the opportunity for equity participation in one of the nation's most dynamic landscape development companies. Send resume with experience and salary history to: WTT Box 407. All resumes held in confidence. 12/86

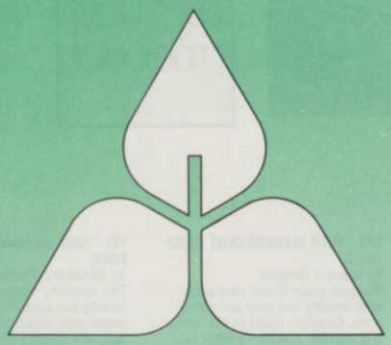
Fleet Superintendent/Equipment Coordinator to perform maintenance on diesel/gas equipment 80 h.p to 1 h.p. and coordinate the use of equipment for a grounds maintenance service company throughout the state of Florida. Please send resume to Quandt-Ayer Enterprises, P.O. Box 271880, Tampa, FL 33688. 1/87

Sales and Service person needed in Virginia Beach area. Only experienced, licensed applicators with excellent customer service skills will be considered. Send resume and references to: Lawn Medic of Tidewater, P.O. Box 1786, Chesapeake, VA 23320. TF

LANDSCAPE ARCHITECT - Wisconsin - Neenah Nationally acclaimed landscape design/build firm in Wisconsin is looking to fill an immediate opening in their Landscape design/build office. Disciplined, client-oriented, degreed landscape architect with superior design talent is desired. Experience preferred, but will train a person with the right credentials. A competitive total compensation package offered. If you are one of the cutting-edge top 10%, please send resume and references to: LIED'S LANDSCAPE DESIGN & DEVELOPMENT, N63 W22039 Hwy 74, Sussex, WI 53089 - Phone (414) 246-6901. 12/86

CITY FORESTER($28,250 - $34,948): Administrative responsibility for the forestry function. Plans programs and methods, and coordinates assigned activities. Requires Associate's Degree in Forestry, plus four years supervisory experience in a forestry program, or a BA and two years experience, or equivalent. Candidates must be eligible for NY Pesticide Applicator's License and willing to obtain NY driver's license. Submit letter of application and resume to Thomas Johnson, City of Rochester, 30 Church St., Room 103A, Rochester, New York 14614 by January 15, 1986. EOE. 12/86

Until now . . . there hasn't been a targeted national forum for the landscape professional.



Pro Show 87

The Professional Landscape Contracting, Turf and Grounds Maintenance Expo (Pro Show) is the international trade show and conference program devoted to the needs of buyers, end-users and manufacturers of landscape contracting, turf and grounds maintenance products and services.

Join with industry heavyweights in power equipment, irrigation, chemicals and fertilizers. Join with other tough-minded landscape buyers, managers, dealers and distributors to evaluate more productive, labor-saving products, to search for more comfortable and safe equipment and to seek new ways to reduce operating costs.

November 17–19, 1987
Dallas Convention Center

Pro Show will feature . . . national manufacturers in 125,000 net sq. feet of indoor exhibit space . . . 1 million sq. feet of outdoor demonstration area . . . more than 3 dozen seminars and hands-on tutorials . . . big-time entertainment and Texas-style fun.

Make plans now to participate in Pro Show 87. November 17–19, 1987. Dallas Convention Center. Dallas, Texas.

For exhibit information, call Warren Sellers at 502/582-1672. For attendee information, call Pat Schmidt at 502/582-1672.

Or write:

Pro Show 87
101 N. Seventh Street
Louisville, KY 40202

1-800-654-0349
502/582-1672
Telex # 213372 MONT/LVL

The one show. Pro Show.

Sponsored by the Outdoor Power Equipment Institute, Inc.

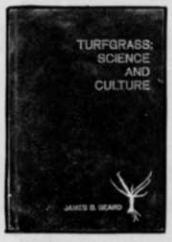
Circle No. 120 on Reader Inquiry Card

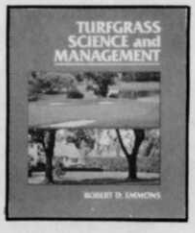
BOOKSTORE

625 - ADVANCES IN TURFGRASS ENTOMOLOGY
edited by Niemcyzk and Joyner
A complete account of the facts presented at the 1980 Symposium on Turfgrass Insects. 200 photographs, tables and graphs make this volume an indispensable reference for anyone connected with the turfgrass industry or research. **$24.95**

010 - ADVANCES IN TURFGRASS PATHOLOGY
by Joyner and Larsen
Leading U.S. turf pathologists report on turfgrass diseases, phythium blight, snow molds, fairy rings, leaf spot of Kentucky bluegrass in Minnesota, initial and field fungicide screening, turfgrass disease resistance, etc. Contains new ideas on how to combat turfgrass problems. **$27.95**

645 - MANAGEMENT OF TURFGRASS DISEASES
by J.M. Vargas
Identifies turfgrass diseases by description and illustration. Includes a holistic approach to healthy turf and lawns. Presents practical management strategies for golf courses, lawns and athletic fields. 204 pages, illustrated. **$26.70**





630 - TURFGRASS: SCIENCE AND CULTURE
by James Beard
Comprehensive basic text and reference source used in many leading university turf programs. Includes findings of current research compiled from more than 12,000 sources. **$30.95**

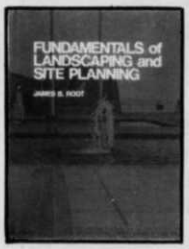
605 - TURFGRASS SCIENCE AND MANAGEMENT
by Robert D. Emmons
Discusses the establishment and maintenance practices used by successful turfgrass managers. Deals with the relevant scientific theory and practical management skills. Provides guidelines for turf maintenance of golf courses, lawns, athletic fields, parks, cemeteries, sod farms. **$25.79**

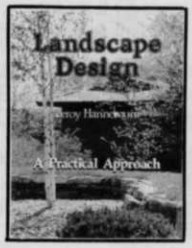
640 - TURF IRRIGATION MANUAL
by James Watkins
A guidebook for engineers, architects, designers and contractors. Keeps pace with the latest developments in turf and landscape irrigation. Specific chapters devoted to rotary sprinkler design systems. Golf course design systems and expanded engineering and reference material. **$23.95**

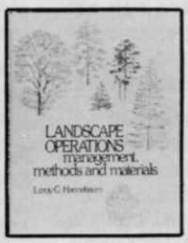
615 - TURF MANAGEMENT FOR GOLF COURSES
by James Beard
Written by an eminent turfgrass researcher, this USGA sponsored text is an ideal reference and "how to" guide. Details all phases of golf course operations including course design and construction, turf management, course administration, irrigation, equipment and disease and pest control. Fully illustrated. **$52.75**

620 - TURF MANAGEMENT HANDBOOK
by Howard Sprague
Practical guide to turf care under both healthy and poor turf conditions. Chapters cover turf in cooler and warmer regions, fertilizer use, regular turf care, weed and disease control and special turf problems. Useful seasonal schedules for management of turf areas. **$19.00**

110 - TURF MANAGER'S HANDBOOK
by Daniel and Freeborg
This specially designed manual by leading turf specialists is a comprehensive, organized approach to turfgrass science and care. An easy, on-the-job reference for planning, purchasing, hiring, construction and plant selection. **$28.95**







305 - FUNDAMENTALS OF LANDSCAPING AND SITE PLANNING
by James B. Root
Covers everything from the evolution of the earth's surface and the primary needs and functions of plant life to site planning and the concept of contours and the methodology of organizing a landscape. Demonstrates environmental design techniques. **$29.50**

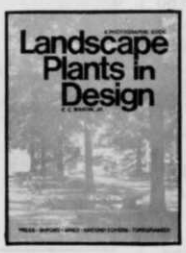
300 - LANDSCAPE DESIGN: A PRACTICAL APPROACH
by Leroy Hannebaum
Geared for the commercial designer/salesperson, this is a one-stop guide to the landscape design process. Covers the entire highly competitive field including design analysis techniques, pointers on land forms, specialized business landscaping methods, environmental design guidelines, specifications, estimations, bids. **$24.95**

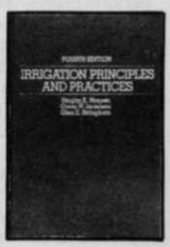
370 - LANDSCAPE OPERATIONS: MANAGEMENT, METHODS & MATERIALS
by Leroy Hannebaum
An in-depth examination that combines technical training in landscape science with methods of accounting, business management, marketing and sales. Discusses effective methods for performing lawn installations, landscape planting and maintenance. Step-by-step accounting calculations are explained in simple terms. **$24.95**

365 - LANDSCAPE PLANTS IN DESIGN
by Edward C. Martin
An annotated photographic guide to the design qualities of ornamental plants and their aesthetic and functional use in landscape designing. Over 600 trees, shrubs, vines, ground covers and turfgrasses are described in non-technical language. Over 1900 photographs. Provides a basis for selecting the best plant materials for any particular use in landscape design. Contains detailed indexes that provide quick reference to particular design qualities and growing conditions. **$55.00**

375 - RESIDENTIAL LANDSCAPES
by Gregory M. Pierceall
An excellent reference for individuals involved in the design and development of plantings and constructed features for residential sites. Illustrations and actual residential case study examples are used to communicate graphic, planning and design concepts which are the focus of this text. **$29.95**

635 - IRRIGATION PRINCIPLES AND PRACTICES
by Hansen, Israelsen, Stringham
A new fourth edition of this highly successful textbook presents essential concepts pertaining to water conveyance, application, storage in the soil and use by plants. Basic underlying principles that govern irrigation practices are stressed. **$48.45**



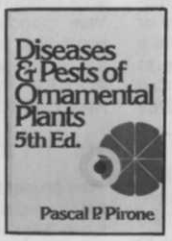


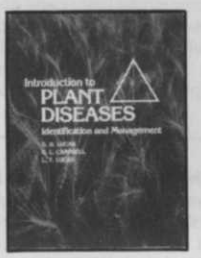
BOOKSTORE

410 - DISEASES & PESTS OF ORNAMENTAL PLANTS
by Pascal Pirone
This standard reference discusses diagnosis and treatment of diseases and organisms affecting nearly 500 varieties of ornamental plants grown outdoors, under glass or in the home. Easy to understand explanations of when and how to use the most effective fungicides, insecticides and other control methods. **$32.50**

515 - INTRODUCTION TO PLANT DISEASES
by Lucas, Campbell, Lucas
Emphasizes four aspects of plant pathology: how to recognize that a plant has a disease, how to determine the cause of the disease, how to manage diseases, where to seek additional help with disease problems. Gives examples of specific diseases and their management. **$29.50**

570 - WESTCOTT'S PLANT DISEASE HANDBOOK
by Kenneth Horst
This fourth edition offers professionals the latest diagnostic and disease control information. Plant entries designed to simplify diagnosis, plus background on the classification of plant pathogens. This handbook gives a specific description of each disease, susceptible plants, specific symptoms of the disease, reported locations and control measures for each disease and their side effects. **$39.50**





665 - ARBORICULTURE: THE CARE OF TREES, SHRUBS AND VINES IN THE LANDSCAPE
by Richard W. Harris
Provides comprehensive coverage of complete planting, site analysis, preparation and special planting methods, fully detailed coverage of fertilization, irrigation and pruning guidelines on preventative maintenance, repair and chemical control, how-tos of diagnosing plant problems, practical data on non-infectious disorders, diseases, insects and related pests and pest management. **$38.95**

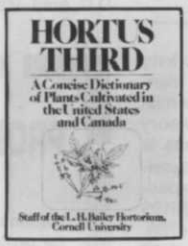
660 - DISEASES OF SHADE TREES
by Terry Tattar
Because shade trees require specialized maintenance rarely used in the forest, this text seeks to aid the arborist in providing necessary care to maintain vigor and prevent shade tree diseases. An in-depth look at infectious and non-infectious tree diseases. Plant pathology not necessary. **$24.50**

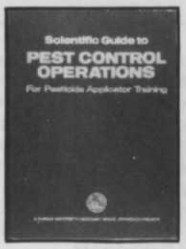
405 - WOODY ORNAMENTALS
by Partyka, Joyner, Rimelspach, Carver
Illustrated plant identification characteristics. Organized in two basic sections: plant identification and plant disorders, this text utilizes 430 color photos, 430 line drawings and 45 black and white photos to simplify identification. **$27.00**

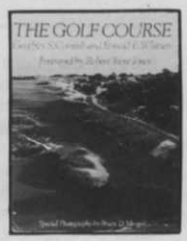
510 - HORTUS THIRD
from Cornell University
A 1,300 page concise dictionary of plants cultivated in the United States and Canada. A reference which every horticulture professional should have. **$125.00**

125 - SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS
by Truman, Bennett, Butts
Provides a sound basis for studying the technical aspects of pest control. Covers pesticides, safety, health and environmental concerns, equipment, flies and mosquitos, rats and mice, birds and much more. **$35.00**

800 - THE GOLF COURSE
by Cornish and Whitten
The first book ever to give the art of golf course design its due, and golf course architects the credit and recognition they deserve. 320 pages and 150 color and black and white photographs. Traces the history and evolution of the golf course, analyzes the great courses, shows how they were designed and constructed. **$35.00**







ADDITIONAL TITLES

345 - COST DATA FOR LANDSCAPE CONSTRUCTION 1985 $32.00

350 - HANDBOOK OF LANDSCAPE ARCHITECTURAL CONSTRUCTION $45.00

690 - INSECTS THAT FEED ON TREES AND SHRUBS $49.50

720 - SHRUB IDENTIFICATION $12.95

750 - TREE IDENTIFICATION $12.95

760 - TREE MAINTENANCE $49.95

565 - WEEDS $39.95

Mail this coupon to: Book Sales
Harcourt Brace Jovanovich Publications
One East First Street, Duluth, MN 55802

Name _____

Street Address _____

P.O. Box Number _____

City/State/Zip _____

Phone Number ( ) _____

Purchase Order Number _____

Signature _____ Date _____

Please send me the following books. I have enclosed payment* for the total amount.

Please charge to my Visa, MasterCard or American Express (circle one)
Account Number _____ Expiration Date _____

BOOK NUMBER AND TITLE	QUANTITY	PRICE	TOTAL PRICE

*Please add $3.00 per order plus $1.00 per additional copy for postage and handling.

_____ (postage & handling)

Please allow 6-8 weeks for delivery.
Prices subject to change.
Quantity rates available on request.

Total Enclosed _____

WTT 1286

LANDSCAPE ESTIMATOR/SALES: Established landscape and nursery firms in Central Florida is looking for an experienced estimator/salesperson for its statewide commercial landscape construction division. Degree in landscape architecture or heavy field experience. Must enjoy working in a team environment and have a strong desire to succeed. Salary plus incentive bonuses. Call 305-831-8101. 12/86

LANDSCAPE MAINTENANCE DIVISION MANAGER for aggressive, multifacted landscape contracting firm in Northern Virginia. Responsibilities include scheduling and on-site supervision of 15 crews, quality control, training and production. Five years experience in all phases of landscape contracting required. Send resume, references and salary history to: Turf Specialists of Northern Virginia, Inc., 10109 Giles Run Road, Lorton, VA 22079. 12/86

DIVISION MANAGER—Large full service commercial landscape management firm. 3 years minimum experience in landscape maintenance of Condos in supervisory role. Necessary skills: scheduling, employee supervision, horticulture detail, communications, with property mgrs., Home Owners Assn., bid estimates. Well established, growth-oriented firm located in top national growth area. Salary commensurate with ability & experience. Full range benefits. Phone 305-788-1082 (Orlando, Florida). 12/86

Large Midwestern Landscape Contractor working with Fortune 500 clients seeking aggressive manager with experience in all aspects of commercial landscape maintenance. Excellent supervisory skills and ability to communicate with clients is required. This is a year round position with excellent benefits. Salary commensurate with experience. Send resume to Vidosh Bros. Inc., 36199 Mound Road, Sterling Heights, MI 48310-4798. Attention: Personnel Department. 1/87

HELP WANTED: Land Estimator - KT Enterprises, Inc. is expanding its landscape installation department & has a challenging new position in our fast growing firm for the right person with exceptional sales ability. Must be experienced in take-offs and costing. Progressive design/build firm doing business in Washington, D.C. Metro area. Excellent salary, benefits & growth potential. Call John Warren 703-922-8540. 12/86

PESTICIDE APPLICATOR: Responsible for pesticide application on 1,000 acre public display garden under the supervision of Longwood's Integrated Pest Manager, this individual will inspect for plant pest, assist with the development of control strategies and teach the principals of pest management to employees and students. Applicant should have a minimum of 3 years practical experience applying pesticides and/or monitoring pest populations. A B.S. Degree with emphasis in Entomology or Plant Pathology is preferred. The ability to operate a wide range of pesticide application equipment is required. Deadline for applications: January 1, 1987. The salary range is $20,820 - $26,700 annually. Excellent benefits. Submit resume and 3 letters of reference to: Donald R. Buma, Longwood Gardens, P.O. Box 501, Kennett Square, PA 19348-0501. 12/86

Spray technicians wanted for quality oriented, prominent company on Eastern Long Island. Knowledge of insects and diseases of ornamental trees desirable. Challenging position, full-time, year-round, wages commensurate experience and benefits. Reply to: Whitmore Worsley, Inc., P.O. Box 10, Amagansett, NY 11937 12/86

Landscape Architects/Supervisors (project foremen) join a nationally acclaimed firm looking to expand into its second generation Long Island area supports a high budget landscape industry. Year round employment, company benefits and continuing education available. Experienced and aggressive people send resume to: **GOLDBERG & RODLER, INC.,** 216 East Main Street, Huntington, New York 11743. 1/87

Tree pruners and climbers wanted for quality oriented, prominent company on Eastern-Long Island. Excellent position, full-time, year round, wages commensurate experience and benefits. Reply to: Whitmore Worsley, Inc., P.O. Box 10, Amagansett, NY 11930 12/86

Turf specialist wanted for quality oriented, prominent company on Eastern Long Island. Manage lawn care program and crew. Excellent position, year round full-time, wages commensurate experience and benefits. Reply to: Whitmore Worsley, Inc., P.O. Box 10, Amagansett, NY 11930. 12/86

Irrigation supervisor and foreman positions. Come join the leading landscape management company in its new irrigation division. Excellent pay,benefits, profit sharing, etc. We are one of the largest commercial companies in the metropolitan D.C. area. Respond to WTT Box 411. 1/87

PROFESSIONAL SALES

TURF PRODUCTS

National Supplier seeking individuals for professional sales to cover Northeast, Mid-Atlantic and Midwest markets. Three to five years sales experience and college degree required. Excellent salary, benefits and car. Call (404)851-0380, or reply with resume to **LaRoche Industries Inc., 1100 Johnson Ferry Rd., NE, Atlanta, GA 30342, Attn: Jeanette Hawkins.**

EQUIPMENT DEALERS: National manufacturer seeking aggressive nationwide coverage in high growth areas. For full catalogue and marketing information please respond to WTT Box 413. 12/86

A rapidly growing lawn care company seeks an individual to perform liquid/granular lawn care applications, as well as lawn renovations. Job has potential to grow into sales and management position. Long hours required during peak periods. Solid background and experience in turf required. Top pay and benefits package. West suburban Boston. Call (617)444-0944 anytime. 12/86

TREE & SHRUB CARE MANAGER: Expanding lawn and tree care company has a new position in the recently opened San Antonio operations. Position requires a proven manager with minimum 2-5 years experience in managing residential tree and shrub spraying; technical expertise in implementing a workable chemical program; and good financial knowledge of the tree spraying business. Competitive benefits and compensation. All replies are kept confidential. Send resume to: Manager, Ever-Green Lawns, 7438 Reindeer Trail, San Antonio, TX 78238 EOE. 12/86

Branch Manager-Landscape Management: Excellent opportunity with expanding professional landscape management organization located in Houston, Texas. Must possess management and marketing skills and knowledgeable in equipment and maintenance operations. Salary/Bonuses commensurate with education, experience, and results. Send resume to WTT Box 409. 1/87

PESTICIDE APPLICATOR/ARBORIST—COLORADO'S FRONT RANGE: Supervise and Perform with a fast growing Commercial Company. Pesticide Applicators License and two years monitoring and/or applying Pesticide required (All areas - Turf, Trees and Beds). Horticulture and Arboriculture background helpful. Snow Removal in Winter. Fulltime career with good salary and benefits. Send Resume, Job Experience with references and salary needs to **PERFECTION GROUNDS MAINTENANCE, INC.,** P.O. Box 9221, Colorado Springs, CO 80932. 12/86

Maintenance foreman to do quality commercial maintenance. Knowledge of turf and ornamentals and at least 3 years experience. Good salary and benefits. Reply to Country Greenery, Box 638, Pittstown, NJ 08867. 3/87

MANAGEMENT: Mid-Atlantic multi-branch established lawn care firm seeks branch manager. Position available 1-1-87 for aggressive, qualified applicant with proven record of success. Experience in operations, administration, field and office a must. Send full resume, salary, benefits and incentive requirements to WTT Box 408. 12/86

Estimator/Salesperson: A diversified, growing, suburban Cleveland landscape firm has an opening for a landscape Estimator/Salesperson for commercial projects. Applicants must have experience in commerical landscape contracting and a college degree in a related field, ability to deal with landscape architects and general contractors needed. We are looking for a highly motivated individual with a proven record to help us grow. If you are qualified for this career opportunity, please send resume, work and salary history to Chagrin Valley Landscaping, P.O. Box 391002, Solon, OH 44139. 12/86

MANAGEMENT: Ever-Green Lawns Corporation, a division of the multi-national Hawley Group, Ltd. is looking for experienced lawn and tree care professionals. Please respond in writing only to Richard D. Niemann, Corporate Recruiter, Ever-Green Lawns Corp., 1390 Charlestown Industrial Drive, St. Charles, MO 63303. TF

Career Opportunities

A leader in the Wholesale Nursery Industry operating two major growing facilities and five re-wholesale yards through-out the northeast has openings for qualified Supervisor-Trainees through our ongoing recruitment program. If you enjoy a growth climate and have the attitude and skills to join a major company, we have a place for you. Send resume to or call Jim Fleming at:

The Robert Baker Companies,
1700 Mountain Road,
West Suffield, CT 06093,
203-668-7371

LAWN EXPERT: Individual with education and experience to manage lawn service for progressive Central Jersey tree expert company. Growth opportunity. Send resume to P.O. Box 230, South Plainfield, (NJ) 07080 or call 201-561-9440 A.M. 12/86

OUTSTANDING OPPORTUNITY FOR AN ARBORIST with sales management experience to join rapidly growing, full-service tree care company. All benefits and incentives. Call or send resume to **SAV-A-TREE OF WESTCHESTER,** c/o Daniel Van Starrenburg, P.O. Box 527, Armonk, NY 10504. 914-666-8202. 12/86

COMMERCIAL LAWN TREE AND SHRUB CARE BRANCH MANAGER NEEDED. Largest commercial company in Washington D.C. area expanding its application division. Looking for person experienced in management of lawn and ornamental applications. Experience in both not a must, but desired. Full benefits, salary profit sharing, etc. Please send resume to WTT Box 410. 1/87

FOR SALE

Landscape contracting business for sale. Established in 1975. Santa Barbara, Calif. Residential and commercial landscapes, commercial maintenance. Inquire (805)964-7403. $200,000.00 12/86

FOR SALE: 1980 Toro Parkmaster HTN, 7 gang, 7 reel, 7 blade; 1980 FMC D020 300 gal. sprayer; 1980 Foley reel grinder, model #388 and a 1980 Foley bedknife grinder, model #384. For more information call 305-225-1200, FL. 12/86

Vermeer 630 Stump Grinder. Excellent condition and well maintained. Area Code (717)898-8591 or 898-7443. 12/86

BOWIE HYDRO-MULCHERS AND STRAW BLOWERS, New and used. Landscape Supply, Ltd., P.O. Box 22092, Greensboro, NC 27420. (919) 292-2922. 1/87

FINN HYDROSEEDERS & MULCH SPREADERS. New & Used. Wolbert & Master, Inc., P.O. Box 292, White Marsh, MD 21162, 301-335-9300. 6/87

SPYDERS - Used and reconditioned 2500 S. Cooper, Arlington, TX 76015. 817-261-7346 Mark. 2/87

ZOYSIA MEYERS Z-52 SOD OR SPRIGS. EXCELLENT QUALITY DELIVERED ANYWHERE AT REASONABLE PRICES. DOUBLE SPRINGS GRASS FARM, SEARCY, AR. (501) 729-5691. 5/87

BROUWER HARVESTER OWNERS! ELECTRIC DEPTH CONTROL. Save time and money with improved quality control. Make depth-of-cut adjustments, on the move, with one button finger tip control. Allows you to cut longer rows through varying soil conditions. $895. 30-day satisfaction guarantee and full-year warranty. Write or call: Shattuck Turf Equipment, 1872 N.W. 82nd, Des Moines, IA 50322, (515) 278-5255. Patent pending. 12/86

---

2 Jim Dandy Tractors - $850.00 each; 2 Lawn-A-Mat stainless steel combines - $800.00 each; 1 tractor and 1 combine for parts - $350.00 each; 2 flatbed trailers - $150.00 each. Must Sell! (203) 325-3191. TF

TREE FERTILIZATION GUN tested on over a million square feet of trees and shrubs all over the U.S. Good to 500 psi, repairable, non-corrosive. Buy direct from manufacturer, $106.00 (shipping included). Arbor-Nomics, Inc., 585 Langford Lane, Norcross, GA GA 30071. (404) 447-6037. TF

ATTENTION GOLF COURSE SUPERINTENDENTS: Great Meyer Zoysia for your Fairways and Tees. Guaranteed Bermuda free. Beauty Lawn Zoysia (Cincinnati) 1-513-424-2052. 1/87

BALL BARRIER NETTING: Made of olefin fibers. 6 1/2 feet and 25 feet high. Strong and tough. Will not rust. Easy to handle. For Driving Ranges and Golf Courses. Keep golf balls from straying off-course. J. A. Cissel Mfg. Co., P.O. Box 339, Farmingdale, N.J. 07727. 1-800-631-2234. TF

HYDRO-MULCHERS AND STRAW BLOWERS New and used. **JAMES LINCOLN CORPORATION,** 3220 S. Jupiter Rd., Garland, TX 75041. (214) 840-2440 (TX), (800) 527-2304 (except TX). TF

LAWN SEED. Wholesale. Full line of top quality grasses. Improved bluegrass varieties, fine fescues and fine bladed ryegrasses. We specialize in custom mixing. Oliger Seed Company, 89 Hanna Parkway Akron, OH 44319. Call collect (216) 724-1266. TF

SPYDERS — used and rebuilt. Also a complete line of replacement parts for your Spyder. Call or Write: Mobile Lift Parts, Inc., 5402 Edgewood Rd., Crystal Lake, IL 60014. 815-455-7363. 12/86

---

77 GMC 2 ton spray truck, 1000 gallon tank recessed on flatbed. 1984 Hannay Reel, Meyers 2C95 pump, PTO, 100 gallon steel auxiliary tank. 76 ford 1 ton spray truck, 750 gallon tank Hannay Reel, Meyers 2C95 pump, PTO, 50 gallon poly auxiliary tank. 78 E-Z GO truckster with Meyers boom sprayer, foam marker, PTO, Hannay Reel 29" diameter, 12 volt, recoil ½". Call 317-284-1429 or 317-284-0265. 12/86

REEL GRINDER USED EXPRESS DUAL: Reel Grinder and Angle Master bed knife grinder. Both in excellent condition. Asking $9,500 for the pair. Call Mowing Machine Grinders and Reels, Inc. 205-222-2591. 12/86

SPRAY TRUCKS: 1983 Ford F350, 600 gallon and 100 gallon Fiberglass Tanks, high and low volume capability, two reels, 500 ft. hose, Kohler engine, FMC pump - $9,000. Call Paul Skorupa 401-438-6204. 12/86

LAWN-LANDSCAPE MAINTENANCE CORP. FOR SALE LOCATED IN SPRINGFIELD, MISSOURI. Established with excellent reputation and equipment, built on quality service, doing $200,000 annually. Call 417-887-3225. 12/86

Landscape Maintenance Company for sale. Large commercial accounts and equipment. Asking 175k, call (914) 353-1286. 12/86

RYAN RIDEAIRE II'S in the box -- $2,200. 1-800-255-8873. 12/86

CUSHMAN HAULSTER FOR SALE

3 wheel Haulster w/22hp engine, hour meter, cab, wiper, turn signals, tow hitch. Has stake bed which can be easily removed. 750 hours on meter. 1985 model. Asking $4250.00. Will deliver to qualified buyer.

Call (803) 886-6293
P.O. Box 12, Isle of Palms, SC 29451

USED EQUIPMENT

BUCKET TRUCK: Hi Ranger 65', 57', 50'. Skyworkers with chip boxes. Asplundh bucket trucks with chip boxes. Asplundh brush chippers. Bean 55 gal. sprayers. Parkway Equipment Company, 633 Cecilia Drive, Pewaukee, WI 53072. 414-691-4306. TF

Jerry Clipper Lawn Mowers, pull type, PTO driven, 9 gang, 1982 model, very good condition, $7,500. Contact: Robert 1-514-267-9182 or 3242. 12/86

BUCKET TRUCKS, Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Morbark Disc Type, New Woodchuck Drum Type. Best prices anywhere. Used Chippers - Asplundh, Woodchuck, etc. 2 to 8 usually in stock. Sprayers, Dumps, Stakes, Log Loaders, Crew Cab Chip Box Dumps, Railroad Trucks, 50 in stock. Sold as is or reconditioned. Opdyke's, Hatfield (Philadelphia Area) 215-721-4444. TF

Circle No. 110 on Reader Inquiry Card

NEW AND USED EQUIPMENT—Asplundh, Hi Ranger and Lift-all forestry bucket trucks, Chipmore wood chippers. Mirk, Inc., (216) 669-3567, (216) 669-3562, 7629 Chippewa Road, Orrville, Ohio 44667. TF

WANTED

Wanted to buy **HYDRO SEEDER.** Please send photo. Johnson Hydro Seeding Corp., 13751 Travilah Road, Rockville, Md. 20850 301/340-0805. TF

WANTED: Large Lindig and Royer Shredders. Lewis Equipment. 320 Third Street S.W., Winter Haven, FL 33880. (813) 294-5893. 4/87

WANTED: Beck double hopper planter, 9″ rows, 15 or 16″ material. 301-948-2900. 12/86

ORKIN LAWN CARE

Wants to acquire lawn care/pest control companies doing $1,000,000 or more annual revenue. Sell us your business. Stay and grow with us if you wish. Reply to Gordon Crenshaw (404) 888-2770.

POSITION WANTED

AVAILABLE: PROFESSIONAL TURF MANAGER - USA's most experienced Hybrid bermudagrass turf manager. Heavy experience in: Planning, construction, renovation, irrigation, machinery, growing-in and managing the finished complex. Years in consulting, multi-course, real estate as well as private clubs. Will relocate anywhere in Sunbelt. Certified Class A by Golf Course Superintendents of America. For resume write: Turf Manager, P.O. Box 635, Decatur, Georgia 30031. 12/86

Available Spring 87. Male, 28, married, licensed arborist, mechanical/horticultural degree, veteran, managerial and technical experience. ISO 1st class, tree, landscape, or nursery organization. Flexible to your needs. 301-465-8626. 1/87

EDUCATIONAL OPPORTUNITIES

EDUCATIONAL OPPORTUNITIES—Learn Golf Course Superintending, Park Supervision, Irrigation Management, Landscape Contracting. Fully accredited, VA approved, expanded faculty and facilities: major ongoing turfgrass research project. Many job placement opportunities, for information contact: Department of Golf Course Operations Landscape Technology: Western Texas College, Snyder, Texas 79549. 1/87

SERVICES

CONSULTING SERVICES: Grow your business with someone else's experiences. **PROGRAM DEVELOPMENT, TRAINING NEEDS, OPERATION START UP OR EXPANSION and LEGISLATIVE** problems. Over 10 years experience with the industries' leaders. Please contact: Philip E. Catron, M.S., 2658 Haney Ave., Damascus, MD 20872, 301-253-5652. 12/86

MISCELLANEOUS

FREE PARTS CATALOG—If you own a 36″—48″—52″ walk-behind mower and you feel you're paying too much for parts, call Preco Distributors toll-free and request our parts catalog. **BELTS, BLADES, GRASS CATCHERS, WHEELS AND LOTS MORE!** Replacement parts that fit: **BOBCAT, BUNTON, KEES, EXMARK & OTHERS.** 1 day shipping coast to coast available. All parts carry a 90-day warranty. Don't wait, call 24 hours a day. **TOLL-FREE 1-800-428-8004, in Mass. 413-596-5505. PRECO DISTRIBUTORS, 2400 BOSTON ROAD, WILBRAHAM, MA 01095.** TF

ATTENTION!! LAKE CITY COMMUNITY COLLEGE GOLF & LANDSCAPE ALUMNI: We need your current address - Please send address and phone number to: John Wildmon, c/o Lake City Community College, Rt. 3, Box 7, Lake City, FL 32055. 1/87

The Virginia Turfgrass Council

CONFERENCE AND TRADE SHOW

JANUARY 21/22/23

THE VIRGINIA BEACH PAVILLION CONFERENCE CENTER

ONE OF THE LARGEST TRADE SHOWS IN THE EAST
OVER 120 EXHIBITORS/30,000 SQ. FT. OF TRADE SHOW SPACE

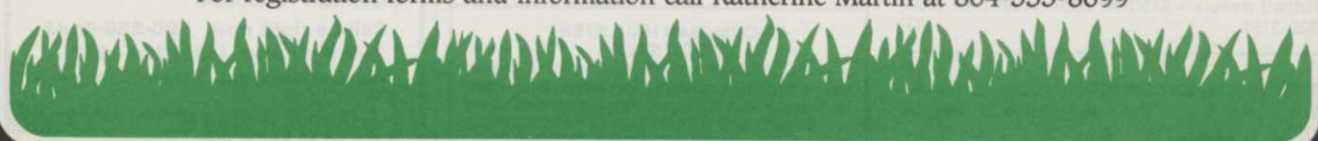
- Golf course session
- Lawn care session
- Sod production and installation session
- Erosion control session
- Athletic field session
- Parks, institutions and cemetaries
- Highway/rough turf

VTC Member		Non-Member	
55.00	Pre-Registration	75.00	Pre-Registration
65.00	After January 9	85.00	After January 9

Dr. Clinton Hodges	Professor of Plant Pathology Iowa State University
Dr. Dan Potter	Associate Professor of Entomology University of Kentucky
Dr. Richard White	Associate Professor of Turf Physiology Rutgers University
Dr. Leon Lucas	Extension Turf Pathologist North Carolina State University
Dr. Charles Bethke	Director of Research and Development Michigan Peat Company
Kathy Copely	Editor of "Grounds Maintenance Magazine"
Pat O'Brian	Regional Agronomist U.S.G.A.

Other speakers include professors from Virginia Tech including:
Dr. H. B. Couch, Dr. Wayne Bingham, Dr. Jack Hall III, Dr. Richard Schmidt, Dr. Dave Chalmers and Others

For registration forms and information call Katherine Martin at 804-353-8699



EVENTS

December

North Central Turfgrass Exposition, Dec. 9-11, O'Hare Exposition Center, Rosemont, Ill. Contact: Alfred Van Horn III, Illinois Turfgrass Foundation, 435 N. Michigan Ave., Suite 1717, Chicago, IL 60611-4067. (312) 644-0828.

Southern Nevada Desert Turfgrass Conference, Dec. 12-13, Palace Station Hotel and Casino, Las Vegas, Nev. Contact: Bob Morris, 953 E. Sahara, Suite 207, S.T.&P. Building, Las Vegas, NV 89104. (702) 731-3130.

Landscape Design Short Course, Dec. 15-17, OARDC, Wooster, Ohio. Contact: Fred K. Buscher, OARDC, Wooster, OH 44691-9982. (216) 263-3831.

Texas Turfgrass Association Conference & Show, Dec. 15-17, Hyatt Regency, Houston, Tx. Contact: Shirley Duble, 3606 Meadow Oaks, Bryan, TX 77802; (409) 268-0630.

January, 1987

Annual Conference of the Tennessee Turfgrass Association, Jan. 5-7, Music City Rodeway Inn, Nashville, Tenn. Contact: Donnie Callis, (800) 342-1016.

California Pest Control Seminars, Jan. 6 (Salinas), Jan. 8 (Riverside), Jan. 12 (Visalia), Jan. 14 (Modesto), Jan. 15 (Yuba City). Contact: Shirley Humphrey, Entomology Extension, University of California, Davis, CA 95616. (916) 752-0470.

AD INDEX

NO.	ADVERTISER	PAGE
101	American Cyanamid/*Pendimethalin*	38-39
	American Cyanamid/*Image* (reg.)	54-55
103	American Trencher Inc.	14
301-309	Brouwer Turf Equipment	35
105	Bunton Company	CV3
221	Chevron Chemical Co.	33
107	Classen Mfg.	14
108	John Deere & Company	30-31
109	Dow Agricultural	17,19
110	Goossen Industries	57
111	Gravely International Inc.	42-43
220	Howard Price Turf Equipment	37
113	Landscape Edging	47
114	Lesco, Inc.	3
215	Lesco, Inc.	41
116	Lofts, Inc.	CV4
117	Morbark Industries, Inc.	27
118	National Mower	12-13
119	PBI/Gordon Corporation	4-5
120	Pro Show '87	53
121	Rhone-Poulenc, Inc.	23
122	Scag Power Equipment	24
123	Spraying Devices, Inc.	22
124	Tee-2-Green	CV2
125	Toro Co./Irrigation Division	21
126	Turf Vac Corporation	50
127	Wells Cargo, Inc.	59

This index is provided as an additional service. The publisher does not assume any liability for error or omissions.

The ProSource

Is your business worth $2.90 a week?

$2.90 won't buy much these days. That's why membership in the Professional Lawn Care Association of America is such a bargain. Membership can cost as little as $150 a year—$2.90 a week. And PLCAA membership brings with it benefits available nowhere else:

- Publications like the 64-page **Safety Manual;** the **Technical Resource Manual:** the **Management Monograph Series;** the **Legal Update Bulletin;** and **Turf Talks,** PLCAA's information-filled newsletter.
- Access to group health, life, and disability insurance tailored to your business needs.
- Regional seminars, and PLCAA's annual Conference and Show to keep you up with changing technology.

To find out more, call (404) 977-5222 or fill in the coupon and mail it today!

Symbol of Good Practice PLCAA Professional Lawn Care Association of America

Send me more information on what PLCAA can do for my business.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

Clip and mail to:
Professional Lawn Care Association of America
1225 Johnson Ferry Rd. NE, Suite B-220, Marietta, GA 30067

WELLS CARGO™

A GREAT TRAILER for TURF MANAGEMENT!

There is a Capacity to Fill Your Needs from 1-Ton to 5-Ton

Steel structured for maximum life and minimum maintenance. Wells Cargo trailers are an easy, economical, efficient way to haul nursery stock, fertilizer, seed, sprayers, implements, mowers . . . everything your job requires.

We have manufacturing sales & service facilities in IN, GA, TX, & UT and a national network of dealers to serve you.

For FREE literature call TOLL FREE 1-800-348-7553 or write

Wells Cargo, Inc.
P.O. Box 728-595
Elkhart, IN 46515
(219) 264-9661

Circle No. 127 on Reader Inquiry Card

A final note on women

I'm no Gallup, but while tracking down women superintendents, I started taking a poll. I asked men in the green industry—superintendents, researchers, executives—to name women in their business.

Most just shook their heads. It wasn't clear if they just didn't know any, or if the whole concept bothered them.

The impact of women in the green industry can no longer be ignored.

Take the seed market, for example. Three major seed manufacturers have their daughters working in highly visible positions: Gayle Jacklin, marketing for Jacklin Seed; Sheri Burlingham, domestic sales manager for E.F. Burlingham and Sons; and Crystal Rose-Fricker, plant breeder with Tee-2-Green Corp.

Although it's still rare to see women Ph.D.s in turf programs at universities, there are some: Dr. Pat Vittum, turf entomologist, University of Massachussetts; Dr. Pat Cobb, extension entomologist, Auburn University; and Dr. Jackie Mullen, plant pathologist, Auburn, to name a few.

Jack Murray, (USDA-Beltsville), tells about the time he and research plant pathologist Nikkii O'Neill went to look at turf disease problems at Burning Tree Country Club in Silver Springs, where the male elite of Congress play golf. O'Neill was the first woman allowed on the course. University of Maryland researchers can't even consult on the "men-only" course during state time.

With qualified women working in the industry, it's time golf courses stopped discriminating in hiring women as superintendents. (Not to mention that women should be allowed to join that club).

Such prejudice exists in corporations, as well. I heard that the president of a major green industry company refuses to hire women, because of the poor performance of one woman in his company.

How often has a man's work suffered from a personal problem such as a a rocky marriage or relative's death? With the industry 95 percent male, those cases seem scarce among men who are hard workers. When one of the comparatively few women in the industry makes a mistake, it can reflect poorly on all women.

It may be an Olympic task for women to break the barriers that have kept them out of the green industry. But, women are succeeding.

Heide Aungst

Heide Aungst, associate editor

Questions and comments are encouraged.
Write or call editor Jerry Roche:
7500 Old Oak Blvd.,
Cleveland, OH 44130.
Phone: 216-243-8100.

WT&T Editorial Advisory Board

Doug Chapman
Horticulturist
Dow Gardens
Midland, MI

J.R. Hall
Extension Agronomist
VPI & SU
Blacksburg, VA

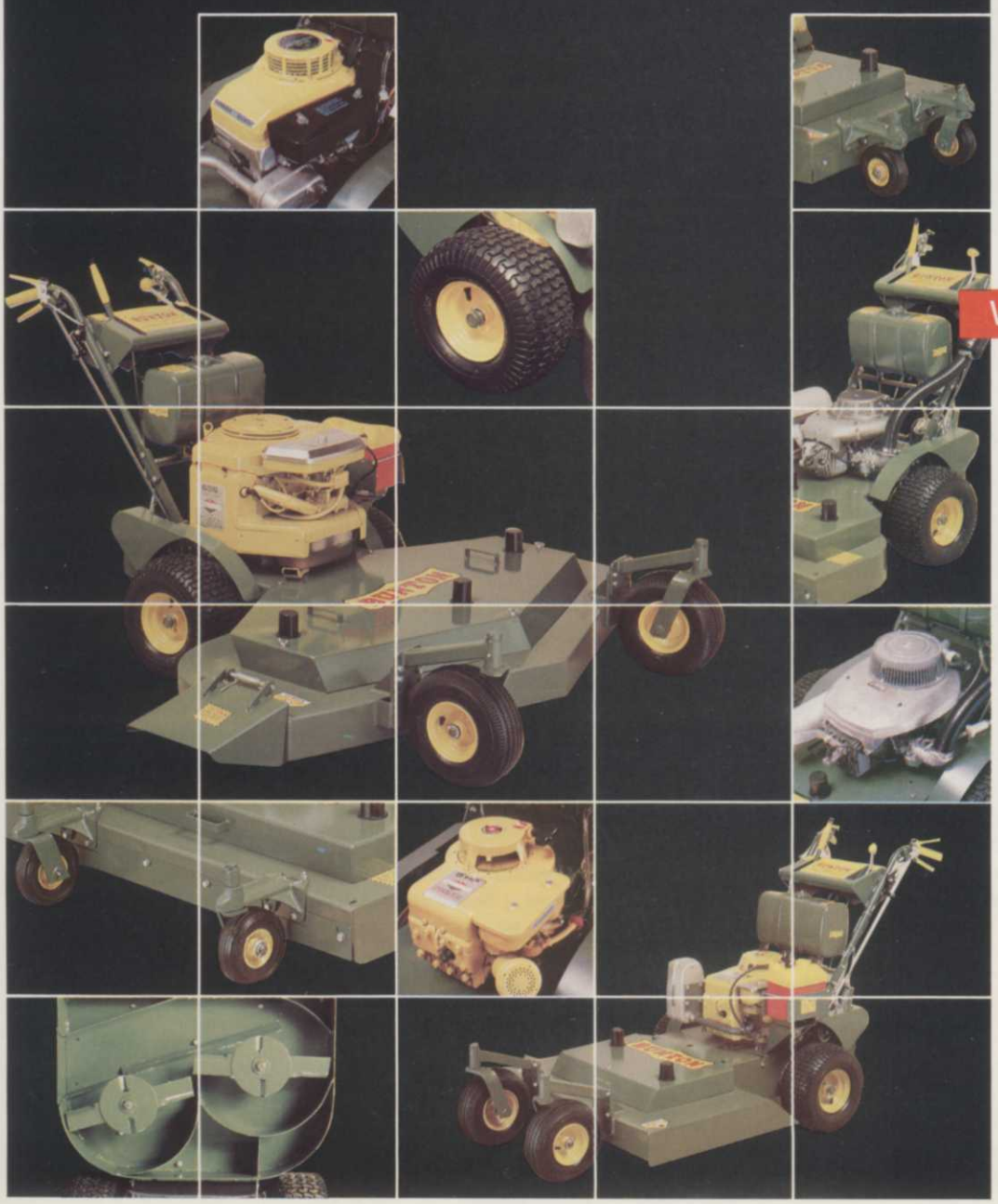
Kent Kurtz
Professor
Horticulture
Cal Poly-Pomona

Harry Niemczyk
Professor
Ohio State University
Wooster, OH

A. Marty Petrovic
Asst. Professor
Cornell University
Ithaca, NY

Robert Shearman
Assoc. Professor
University of Nebraska
Lincoln, NE

HOW TO TELL IF YOUR COMMERCIAL MOWER IS SIZED RIGHT FOR YOU



There are three ways to be sure your commercial mower is sized right.

Deck size

determines rate of cut, transportation methods and ability to trim in tight quarters. With Bunton you select from 61, 52, 48, 40, 36, 32, 28 and 24 inch cutting widths, each with blade and baffle designs developed specifically to give a high quality cut.

Engine size

determines operating and maintenance costs. With a range from 8 hp to 16 hp you won't be stuck with an engine that is too big, or too small. And with Bunton, you can choose 2-cycle or 4-cycle depending on your needs.

Wheel size

options allow you to customize your Bunton mower for the terrain you mow. Turf casters are ideal for rougher lawns and easy navigation of ditches. Lawn casters protect the finest lawns where quality is of the highest importance.

Bunton Company believes professionals should be able to specify equipment to fit the job. If you agree, call for information on the largest line of mid-size commercial mowers available.

BUNTON

Bunton builds 'em better.

BUNTON CO.

P.O. Box 33247
Louisville, KY 40232
502/966-0550
Telex: 204-340

GSA No.: GS-07F-13196

Circle No. 105 on Reader Inquiry Card

Rebel TURF TYPE TALL FESCUE vs. KY-31

There's really no comparison.

Test after test, year after year, REBEL continues to out-perform KY-31 and other tall fescues. Trials conducted in various parts of the country keep proving that only REBEL offers this important combination of advantages:

APPEARANCE - With REBEL you'll get up to 30% finer and 188% denser turf. Tests show REBEL's leaf width at 2.4mm while KY-31 measures 3.4mm. As far as density? REBEL shows 2,271 tillers per square foot against 789 for KY-31.

TOLERANCE - Tests show REBEL does exceptionally well under all weather conditions . . . wet, sunny, shade, dry. In fact, REBEL is the most heat and drought tolerant cool-season turf grass available.

RESISTANCE - REBEL shows improved resistance to disease and insects.

LESS THATCH - REBEL produces virtually no thatch.

LESS CARE - REBEL requires less water and fertilization than most cool-season turf grasses.

For a finer, denser tall fescue that performs well in all types of conditions, use REBEL. Comparison tests continually prove that there's really no comparison!

Circle No. 116 on Reader Inquiry Card

From university test results REBEL has consistently demonstrated exceptional turf qualities.

1981/82 Turfgrass Quality Ratings for Tall Fescue Varieties Tested at Nine Locations in United States

VARIETY	CA	GA	KY	MD	MS	NC	NJ	VA[1]	VA[2]	MEAN
REBEL	6.8	8.2	7.5	6.5	4.8	7.0	7.6	6.8	5.1	6.7
FALCON	6.8	7.7	6.9	6.6	4.8	6.2	7.3	6.4	5.1	6.4
OLYMPIC	6.9	8.1	6.5	6.3	4.2	5.8	6.6	6.4	4.8	6.2
CLEMFINE	5.9	7.3	6.3	5.9	4.1	6.3	4.6	5.9	4.2	5.6
GALWAY	—	7.5	6.0	6.4	4.8	6.1	5.1	5.5	4.4	5.5
KY-31	5.5	6.8	6.3	5.2	4.1	5.9	3.6	5.4	5.0	5.3
ALTA	5.8	—	5.8	5.2	—	5.2	2.5	—	4.1	4.8
FAWN	—	5.8	5.5	5.1	3.4	4.5	2.1	—	3.9	4.3
GOAR	—	4.7	5.4	5.1	3.1	4.7	1.6	3.0	3.1	3.8

Quality Ratings 1 - 9; 9 = Ideal Turf.

Lofts Inc.
Bound Brook, NJ 08805
(201) 356-8700 • (800) 526-3890

Lofts/Maryland
Beltsville, MD 20705
(301) 937-9292

Lofts/New England
Arlington, MA 02174
(617) 648-7550

Lofts/Great Western
Albany, OR 97321
(800) 547-4063

Sunbelt Seeds, Inc.
Norcross, GA 30071
(800) 522-7333 • (404) 448-9932

Canadian Dist.: Oseco Inc., Brampton, Ontario (416) 846-5080